This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

WIDENER LIBRARY
HX G1EA 5

908.20

Harvard College Library

GIFT OF

LUTHER S. LIVINGSTON

C. Mary Upcher

Jan ~~Feb~~ 15th

1823.

TRAVELS IN SOUTH AMERICA.

FROM

MODERN WRITERS.

TRAVELS IN SOUTH AMERICA.

FROM

Modern Writers,

WITH

REMARKS AND OBSERVATIONS;

EXHIBITING A CONNECTED VIEW OF

THE GEOGRAPHY AND PRESENT STATE

OF THAT

QUARTER OF THE GLOBE.

BY THE

REV. WILLIAM BINGLEY, M.A. F.L.S.

Late of Peter-house, Cambridge, and Author of Animal Biography, &c.

Designed for the Use of Young Persons.

LONDON:

PRINTED FOR JOHN SHARPE,

At Hailes's Juvenile Library, London Museum, Piccadilly,

BY C. WHITTINGHAM, CHISWICK.

1820.

JA 908.20

Harvard College Library
Nov. 10, 1914
Gift of
Luther S. Livingston,
of Cambridge

2699.2

BOUND JAN 21 1915

PREFACE.

In the preparation of this volume, as in that of "Travels in Africa," it has been the design of the Author, by a detail of anecdotes of extraordinary adventures, connected by illustrative remarks and observations, to allure young persons to a study of Geography, and to the attainment of a knowledge of the character, habits, customs, and productions of foreign nations.

The whole work, when completed, is intended to comprize, in a series of detached volumes, and under the arrangement of daily instructions from a parent to his children, an authentic account of all the four quarters of the globe.

It is necessary to state that, in some instances, the narratives are interrupted by additional remarks or observations; but that such remarks are noted by brackets at their commencement and conclusion.

The *vignette* contains a representation of the rope bridge over the river Chambo at Penipé in Peru, described in page 227.

Charlotte Street, Bloomsbury,
London, May 1, 1820.

INDEX OF THE COUNTRIES,

AND

PRINCIPAL PLACES AND OBJECTS DESCRIBED.

Page

AMERICA in General 1

Introduction—original Inhabitants, 1—Discovery of America, 2—Description of the Country, 3—Climate, Inhabitants, 5—Natural Productions, 7.

SOUTH AMERICA in General 8

AMAZONIA 9

River Amazon 10

Condamine's Voyage down the Amazon from Peru to Brazil.

Loxa, Borja, 11—Laguna, Maynas, 12—Yameos Indians, 13—River Ucayala, St. Joachim, Omaguas Indians, 14—Vegetable Productions near the Amazon, 15—River Napo, Pevas, Indians of Pevas, St. Paulo, 16—Indians, Coari, Golden River and Village of Gold, 17—Rivers Cayamé and Purus, 18—Rio Negro, Portuguese Fort, Rio Madeira, Rio Solimoes, 19—Pauxis, Tupinambas Indians, Paru, River Xingu, 20—Carupa, Island of Joannes or Marayo, Para, 21—Macapa, Particulars respecting the Amazon, 23—Natural Productions, 24.

GUIANA 25

Description, Climate, and Seasons, 25.

Portuguese Guiana 26

French Guiana or *Cayenne* 27

Description, Soil, Productions, Indians, 27—Cayenne, description of, 28—Island of Cayenne, Climate, 29—Seasons, Inhabitants, 30.

Dutch Guiana 30

Surinam 31

Description, 31.

Stedman's Five Years Expedition against the revolted Negroes of Surinam.

River Surinam, Amsterdam, 32—Inhabitants of Surinam, 35—Paramaribo, 37—Fort Zelandia, 38—River Cottica, 41, 48, 55, 63—Cormoetibo Creek, 41, 49—Barbacoeba, 42, 55, 62—Devil's Harwar, 43, 48—Slaves,

Page

46—Jerusalem, 49.—Wana Creek, 50—Hope Estate, Comewina, Bottle Creek, 51—Process of making Sugar, 52—Magdenberg, 53—Defeat of the Rebels, 58—Rebel Town, 59—Rebels, 60.

Berbice 65

Description, River, Crab Island, 65—Inhabitants, Government, New Amsterdam, 66—Rivers Canjé and Mahaica, 67.

Demerara 67

Government and extent, 67.

Bolingbroke's Voyage to the Demerara.

River Demerara, 67, 73—Stabroek, 68—Inhabitants, Mestees, Mulattoes, 69—Samboes, Planters of Demerara, 70—Market at Stabroek, 71—New Town, 72—Country adjacent to the Demerara, 73—Produce, Sugar Estates, 74—Seasons, Climate, 75.

Essequebo 76

River, 76—Islands, Leguan, Account of the Settlement, Produce, 77—Government, 78.

Spanish Guiana 78

Extent, Soil, Description, San Thomas, 78—Climate, Produce, Rivers, Cividad Real, Lake of Parima, El Dorado, 79—Indians of Guiana, Caribbees, 81—Worrows, Accawaws, 83—Arrowauks, 84—Taiiras, Piannacotans, 85—General Account of the Indians, 85—Natural Productions of Guiana, 87.

River Oronoko 92

Sources of the Oronoko, Account of this River and its Productions, 92.

Humboldt's Voyage down the Apuré, and thence up the Oronoko.

San Fernando, 94—The Apuré, 95—Yaruro Indians, Animals and Scenery of the Banks, 96—Crocodiles, Plantations, 97—Monkeys, Fish, Manatees, Mouth of the Apuré, 99—Animals, Oronoko, Caribbee Indians, 100—Mountains of Encaramada, Traditions respecting the Great Deluge, 101—Boca de la Tortuga, Turtle Fishery, 102—Mouth of the Arauca, Uruana, Pararuma, 103—Missionary Monks, Indians, Animals, 104—Mission of Carichana, Salivas Indians, Rapids of the Oronoko, Cataract of Cariven, River Meta, San Borja, 105—Guahibo Indians, River Parueni, Great Cataract, 106.

INDEX.

Page

TERRA FIRMA 107

Venezuela or *Caraccas* ..... *ib.*

Discovery, Name, Extent, Colonies, and Commerce, 107—Emancipation of South America, 108—Description of Country, Climate, Seasons, 109—Productions, Mines, Pearl Fishery, Agriculture, 110—Spaniards of South America, Creoles, 111—Slaves, 112—Indians of Caraccas, 113—Palanka Indians, 114—Otomacs, 115—Guaymas, Guaraunos or Guaraons, 116—Aroacas, 118—Salives, Achagoas, 119.

Paria 120

New Andalusia, Gulf of Paria, 120.

Cumana 120

Cumana, River Manzanares, 120—Port of Cumana, 121.

Humboldt's Description of Cumana and its Environs.

Mountains of New Andalusia, City of Cumana, 121—Adjacent Country, Population, 122—River Manzanares, 123—Earthquakes, Earthquake in 1797, 124—Peninsula of Araya, Salt-works at Araya, 125—Indian Potteries, Pearl Fishery, 126—Mountains and Forests, 127—Forests of South America, 129—San Fernando, Mission of the Chayma Indians, 130—Cumanacoa, 131—Two remarkable Caverns, 132—Mission of San Antonio, Convent of Caripe, 134—Cave of Guacharo, 135—Mountain Scenery, 137—Mission of Santa Cruz, 138—Cariaco, Population, Productions, Gulf of Cariaco, 139.

Humboldt's Journey from Cumana to Caraccas.

Cumana, Climate, Earthquakes, 140—Extraordinary luminous Meteors, 141—Barcelona, 142—Guayra, Caraccas, 143—Natural Productions, 145—Mountain of Silla, 146—Religious Festivals, 147—Great Earthquake in 1812, 148.

Humboldt's Journey from the Caraccas to the River Apuré.

La Vega, 151—Vittoria Gold Mine, 153—Cura, Lake of Valencia or Tacaragua, 154—Islands, Hot Springs, 155—New Valencia, Natural Productions, Porto Cabello, 156—Farm of Burbula, 157—Paco de Vaca or Cow-tree, 158—Guacara, Valencia, Plains of the Llanos, 158—Sand Winds, Calabozo, Gymnoti or Electrical Eels, 160—Crocodile, 162—River Guarico, San Fernardo, 163.

Maracaibo 163

Description, Name, Lake, Gulf of Venezeula, Bituminous

Page

Vapours, Venezeula, 164—Coro, Carora, River Morera, 165—Truxillo, Barquisimeto, Varinas, 166—Merida, 167—Maracaïbo, Climate, Inhabitants, 168.

Santa Martha 168
Extent, Description, 168—Productions, Town of Santa Martha, 169.

Carthagena 169
River Magdalena, Description of the Country, 169—Climate and Natural Productions, City of Carthagena, Tolu, 170.

Darien, Panama or *Terra Firma Proper* 171
Extent, Situation, Description, Gulf of Darien, Nombre di Dios, Porto Bello, 171—City of Panama, Climate of Darien, 172—Rivers Darien and Chagré, Isthmus of Darien, 173—Project of cutting a Canal through the Isthmus, 174.

Popayan 174
Description and Productions, 174—City of Popayan, Climate, 175.

New Grenada 175
Description, Santa Fé de Begota, 175—Merida and Honda, 176.

PERU 176
Extent, Ancient Government, Cuzco, 176—Discovery and Conquest, Climate, 177—Description, 178—Soil and Productions, Mountains, Mines, 179—Commerce, 180—Population, Spaniards, Creoles, Peruvian Indians, 181—Mestees, Quarteroons, Cholos, Slaves, Mulattoes, 183.

Quito 184
Description, Climate, Soil, 184—Peruvian Monuments, City of Quito, Earthquakes, Effects of the Great Earthquake, in 1797, Archidona, 186—Tacunga or Latacunga, Riobamba, Guayaquil, 187—Cuenza, 188—Loxa or Loja, 189.

Truxillo 189
Tumbez, 189—Payta, Caxamarca, Truxillo, 190.

Lima 191
Climate and Soil, City of Lima, 191—Inhabitants, Productions, 192—Port of Callao, Seasons, Earthquakes, 193.

Guamanga 195
Climate, Productions, Guancavelica, Guamanga, 195.

Cusco or *Cuzco* 196
Description, City of Cusco and adjacent Country, 196.

INDEX.

Page

Charcas or *La Plata* 197
Description, 197—Potosi, Silver Mines, 198—Chuquisaca or La Plata, 199.

Tucuman 199
Climate, 199—Productions, Yujui or Jujui, Salta, 200—St. Jago del Estero, 201.

Cordova 201
Description, City of Cordova, 201.

Ulloa's Travels in Peru.

Guayaquil 202—Insects and Vermin, 203—Caracol, River Ojibar, 204—Indian Settlement, 205—Climate of the Mountains and Plains, Roads, Mules, 206—Chimbo, 207—Desert of Chimborazo, Hambato, 208—Natural Productions, Quito, Climate, Storms, 209—Seasons, Earthquakes, Mountain of Pichincha, Thunder Storm, 210—Mode of living among the Mountains, 211—Quito, Cuenza, 217.

Humboldt's Journey from Carthagena through Peru to Lima.

Carthagena, Hondo, Santa Fé de Bogota, 218—Bridge of Iconónzo, Cataract of Tequendama, Mountains of Quindiu, 219—Carthago, 221—Popayan, Mountain of Choca, Volcanoes of Puracé and Sotara, Pasto, Ibarra, Quito, 222—Scenery of the Cordilleras, Ascent of the Volcano of Pichincha, 223—Volcano of Antisana, Mountain of Cayambé, 224—Volcano of Cotopaxi, Account of Eruption in 1743, 1744, and 1768, 225.—River Chambo and Bridge of Penipé, Rope Bridges, 227—Volcano of Tunguragua, Riobemba, 228—Ascent of Chimborazo, Volcano of Carguairazo, 229—South American Volcanoes in General, 230—Sitzan, Cumbé, Loxa, 231—San Felipe, Rivers Chayma and Amazon, Caxamarca, Lima, 232.

CHILI 233
Extent, Description, Conquest by the Spaniards, 233—Divisions, Seasons, Climate, Productions, 234—Earthquakes, 235—Volcanoes, 236—Rivers, Commerce, 237—Copiapo, Coquimbo, Valparaiso, St. Jago, 238—Conception or Penco, 239—Inhabitants and Trade, 240—Valdivia, Island of Chiloe, Indians of Chili, 241.

PATAGONIA or TERRA DEL FUEGO 245
Extent, Discovery, 245—Climate, Description, Wager Island, Island of Madre de Dios, 246.

Terra del Fuego 247
Description, Inhabitants, 247—Cape Desire, Cathedral of

Page

York, False Cape Horn, True Cape Horn, 248—Hermite Islands, Cape Good Success, Strait of Le Maire, Staten Island, 249.

Strait of Magellan..... 250

Description and Climate, Cape Virgin, Possession Bay, 250—Cape St. Gregory, Islands of Elizabeh Barthelemi, St. George's Islands, Sandy Bay, Freshwater Bay, Port Famine, 251—Cape Forward, Port Gallant, St. Jerome's Channel, Cape Quod, Cape Victory, 252—Cape Pillar, Cape Desire, 253.

Eastern Coast of Patagonia..... 253

Cape Virgin, Bay of St. Julian, 253—Port Desire or Seal Bay, Cape Blanco, 254—Indians of Patagonia, 255.

Helms' Journey from Buenos Ayres, by Potosi, to Lima.

Buenos Ayres, Escobar, the Pampas, 261—Esquina de la Guardia, 262—Creoles, Cordova, 263—St. Jago, Tucuman 264—Salta, 265—Yujui or Jujui, Cordilleras, Mojos, 266—Hot Springs of Caiza, Potosi, 267—Silver Mines, 268—Hot Springs, Oruro, La Paz, 269—Lake of Tituaca, Roads and Travelling, 270—Cusco, Roads, Mineral Productions, 271—Guancavelica, Quicksilver mine, 272—Andes, Lima, 273.

Guanjaia, Tarma, Pasco, Lauricocha, 275—General Observations on Peru, 276.

BUENOS AYRES or LA PLATA..... 277

Extent, 277—Divisions, Climate, Soil, Productions, 278—Plains of the Pampas, Rivers, 279.

Mawe's Account of Monte Video and the adjacent Country.

Monte Video, 281—Inhabitants, Climate, Harbour, 282—Productions, Description, 283—Adjacent Country, Peon Indians, 284—Horses, 286—Wild Animals, 287—Guaderios, 288.

Buenos Ayres..... 289

City of Buenos Ayres, 289—Environs, 290—Commerce and Port, Inhabitants, Climate, 291.

Paraguay..... 291

Mines, Climate, Productions, 291—Assumption, 292—Abipons Indians, 293—Manacicas Indians, 294.

BRAZIL..... 296

Extent, Description, Plains, Rivers, Productions, 296—Discovery, Climate, Commerce, 297—Government, 298.

Page

Rio de Janeiro 298

Description, Extent, Productions, Mines, 298—Island of St. Catherine, 299.

Mawe's Account of Santos, St. Paul's, and the adjacent Country.

Santos, 301—Cuberton, Mountains, St. Paul's, Astallages, 302—Productions of Country around St. Paul's, 305—Gold Mines of Jaragua, 306.

Mawe's Account of Rio de Janeiro and the adjacent Country.

Rio de Janeiro or St. Sebastian, 309—Royal Farm of Santa Cruz, 310—Canta Gallo, 311—Indians, 312—Santa Rita, Gold Works, 313—Pretended Silver Mine, 314—Natural Productions, 315—Supposed Diamond of immense Size, 316—Diamonds in the Royal Treasury, River Moremim, 317—Topaz Mine, Villa Rica, 319—Productions, Climate, Gold Mines, 321—The Mint, 322.

Mawe's Journey from Villa Rica to the Diamond Mines.

Villa Rica, Mariana, Gold Mines, 323—Platina Mine, Villa do Principe, Gold, 324—Description, Tejuco, 325 River Jigitonhonha, Diamond Mines of Mandanga, 326—Diamond Work of Montero, Gold Mine at Carapata, Tejuco, 330—Minas Novas, Tocaya, Precious Stones, Rio Grande, 332—River Abaitè, Great Diamond, 333—Diamond and Gold Mines, 334.

Bahia 335

Cape St. Frio, St. Thomas, Spiritu Santo, 335—River Doce, Porto Seguro—Lindley's Account of Porto Seguro, 336.

Lindley's Description of Bahia.

Bay of All Saints, Bahia, 339—Inhabitants, 341.

Fernambuco or *Olinda* 343

Description, River Francisco, Olinda, Paraiba, 343—Productions, Rio Grande, Fernando di Noronha, 344.

Marannon or *Maragnon* 344

Extent, Productions, Trade, 344—St. Louis, Island of Marannon, 345.

Para 345

Situation, Description, Para or Belem, River Tocantin, 345.

Goyaz, 345—*Matto Grosso*, *Minas Geraes* or *Generales*, 346.

TRAVELS IN SOUTH AMERICA,

FROM

MODERN WRITERS.

First Day's Instruction.

AMERICA IN GENERAL.

My last course of Geographical Instruction comprised an account of AFRICA*. I will now call your attention to that immense tract, in the western hemisphere, which, from its comparatively recent discovery, we denominate the New Continent. As I did with regard to Africa, I will now do with this quarter of the globe: I will request that you place before you a map of America, after which, taking advantage of the narratives of various travellers who have visited it, I will endeavour successively to lead you through all its most important parts. You must consider me as a traveller, and yourselves as accompanying my journey; but, previously to the commencement of this journey, it is requisite that I should state to you a few particulars concerning the country in general.

And first, with respect to its *original inhabitants*, There are few inquiries more interesting to a philo-

* See "Travels in Africa, from Modern Writers."

sophic mind, than that which would explain the original peopling of this great continent. Various conjectures have been formed on the subject. Some writers have ascribed the first settlements in America to the Canaanites; and others to the Phœnicians, to the Carthaginians, to the Greeks, to the Scythians, and to various other nations. But, to account for these settlements, by supposing that, in a remote period, some vessel may have accidentally been driven thither from the eastern parts of the world, is to rely upon a vague and improbable conjecture. Other writers are inclined to think, that the two continents of America and Africa were originally united, and that they were subsequently severed by some violent convulsion of nature. This likewise is a conjecture, unsupported by evidence. An inspection of a map of the world, however, will show that, at this day, the north-eastern parts of Siberia, and the north-west part of America, are nearly joined; that is, they are separated by a strait not more than twenty miles in width; and that, in a lower latitude, a chain of islands reaches almost from one shore to the other. The inhabitants of these opposite shores resemble each other in features, complexion, manners, habits, and customs; and it is far from improbable, that some families or tribes of wandering Tartars may have migrated across *Behring's Straits*, and may thus have given origin to the population of America. Among all the American tribes, the Esquimaux excepted, there is a great resemblance, both in form of body, and in qualities of mind; and, in every prevailing feature, both of person and disposition, they resemble the tribes that are scattered through the north-east parts of Asia. The Esquimaux are not unlike the Greenlanders, in their aspect, dress, mode of life, and language; and Labrador and Greenland are separated from each other only by a narrow strait.

America has not long been known to Europeans. It is true that the *discovery of this continent* has been claimed by some nations at remote periods; but all

accounts of it, anterior to the voyage of Columbus, in 1492, are considered to be fabulous. At a period, however, when darkness had long settled upon Europe, when science was only beginning to raise its head, and when the guides to knowledge were few, this great navigator formed the design of crossing the Atlantic, in the hope of being able to discover a passage by sea to the East Indies, nearer than that which had then been ascertained by the south of Africa. Although this was a bold and hazardous project, he obtained the command of a small squadron of ships from Spain, and engaged in it. The notions that had been entertained respecting the practicability of a western passage, proved fallacious; but Columbus made some important and unexpected discoveries. In his first voyage, he fell in with one of the West Indian islands, and, in his second, he discovered the continent of America. The merit of the latter discovery was indeed claimed by Americus Vespucius, a Florentine navigator, also in the service of Spain; and who, after the death of Columbus, was appointed to an important office in the Spanish navy. This gave him a control over the maritime affairs of that kingdom; and he appears to have taken advantage of it, to publish the first description of America that appeared; to call it after his own name, and to impose upon mankind a notion that his discovery of it was anterior to that of Columbus. His assertions, however, on this subject, have been proved false, and the merit is now universally attributed to his illustrious predecessor.

When we cast our eyes upon the western world, particularly upon those parts of it that are habitable, we are astonished by their extraordinary magnitude. The length of America, from north to south, is more than nine thousand miles, and its greatest width four thousand six hundred. The objects which it presents to our view, are chiefly distinguished by their grandeur and magnificence. The *operations of nature* seem here to have been conducted on a larger scale, and

with a greater proportion of materials than in any other quarter of the globe. All is noble and majestic. The Alps and the Pyrenees, those long celebrated mountains of Europe, sink into insignificance before the Andes or Cordilleras. Chimborazo, the loftiest point of the Andes hitherto known, has nearly five thousand feet of elevation greater than that of the highest mountain in Europe. As the mountains of the new world are elevated and grand, so its plains are extensive and beautiful. In some places, and at certain seasons of the year, the eye feels its imperfection when it attempts to look over the verdant surface of these plains; and the traveller wishes in vain for rocks and woods to relieve his sight. In other parts, there are forests widely extended and almost impenetrable, except to the animals which inhabit them, or to the savages by whom those animals are pursued. Its rivers and lakes are equally remarkable. Of the former, the Plata, the Oronoko, the Marignon or Amazon, and the Mississippi, flow in such spacious channels, that, towards the lower part of their course, they resemble arms of the sea, rather than streams of fresh water. In dimensions and extent they far exceed any of the rivers of the old continent. In North America a chain of lakes extends from east to west. These are of magnitude so immense, that they are rather like inland seas than lakes, and, except the Caspian Sea, they exceed in size the greatest collections of water which any other part of the globe can boast.

In Europe and Asia mankind, and the distinctions of civilization, form the principal features which interest the traveller and the historian. In the new world, man and his productions almost disappear amidst the stupendous display of wild and gigantic nature. The human race here either presents but a few remnants of indigenous hordes, slightly advanced in civilization, or it presents that uniformity of manners and institutions which are observable in the European colonists. But if America occupy no very important place in the history of man-

kind, and of those revolutions which have agitated the human race, it offers an ample field to the labours of the naturalist. A luxuriance of vegetation, an eternal spring of organic life, climates varying by stages as we climb the sides of the Andes, majestic rivers, and the means which it affords for the study of geology, mineralogy, and natural philosophy, infinitely exceed those of any other part of the world.

The *climate* differs, in many respects, from that of the old continent. In America the atmosphere is in general much colder than it is in the same latitudes of Europe and Asia. The northerly winds, passing over the vast extent of land which stretches towards the north pole, acquire a piercing keenness that suffers scarcely any abatement till they reach the Gulf of Mexico. The rigour of the frigid zone extends over half of that which, by its position, should be temperate. On the other hand, the heat of the torrid zone is mitigated by the cooling breezes which descend from the Andes; and, towards the Strait of Magellan, there are countries scarcely habitable on account of the cold.

With regard to the *people* dispersed through this widely extended region, there are only two nations that have formed any sort of political society. These are the Peruvians and the Mexicans, and much of their history is involved in fable. There exist, however, innumerable tribes, which wander over the plains of Brazil, Paraguay, and Guiana, or which inhabit the banks of the Amazon and Oronoko. These are utterly unacquainted with every thing beyond the preservation of their lives, or the mere indulgence of their appetites. Their mental powers are, in general, unexercised and dormant. Many of them are destitute even of houses or huts, and roam from place to place in naked wildness. They are divided into numerous small tribes or communities, among most of whom the bonds of political association are very slight. The individuals that inhabit certain districts appear to combine: this, however, does not arise from a notion of any advan-

tages which would result from subordination, but rather from a view to watch the motion of their enemies, and to act against them with united vigour. As soon as the attack is finished, or the invasion is repelled, the authority of the leader is disregarded, every man recovers his independence, and he submits only to be directed and governed when a new attack is meditated, or a new invasion is to be repelled by the combined force of his tribe. Laws, and the regular administration of justice, are totally unknown among them. They chiefly subsist on the spontaneous productions of the soil, by fishing, and hunting: and a very small portion only of their whole number have made any progress in cultivation of the land. Most of them are ignorant of the nature of the harder metals; and the most valuable cutting instruments that many of the tribes possess, are formed of stone.

With the exception of some provinces of North America, and of a few individuals in the central regions, the native inhabitants of this country are of a light brown, or copper colour. In Africa, the torrid zone is inhabited by negroes, and the blackness of their colour is ascribed to the intensity of the heat in the tropical climates. Whence then does it arise that, within the region of the torrid zone, there are no negroes in America? And how is it that the copper-colour is there so prevalent? To the first of these questions it may be answered, that America is destitute of negroes, because there the heat of the torrid zone is more equally distributed than it is in Africa; and therefore the same effect could not be produced in both regions in the same degree. To the latter it may be replied, that the copper-colour is preserved in the higher latitudes of the New World by the state of society, which, among the American Indians, is uniform; by most of them using certain red pigments, or by some modifying circumstances which we know to exist, but which cannot easily be explained. The whole race of American Indians is distinguished by a peculiar

thickness of the skin. Another peculiarity has been remarked of them, that they have no beards. The latter, however, is occasioned by their constant practice of pulling out by the roots all the hairs, as soon as they appear.

The ordinary stature of the Americans is not very different from that of Europeans. But, owing either to their inactive life, or to some constitutional tendency with which we are unacquainted, their bodies are peculiarly plump and full. It is deserving of notice, that there is not to be seen among them an individual who is lame or deformed: at least who is known to have been so from his infancy. These people are said either to expose or put to death such of their children as are weak or irregularly shaped. A child, whose organization is defective, they consider unable, when grown to manhood, to support itself by fishing or hunting: it is an incumbrance rather than an advantage to the community; and, to prevent this, they destroy it in its infancy.

Of the manners and habits of life of the several tribes of American Indians, I shall hereafter have occasion to speak. But before I dismiss these general observations, I must say a few words concerning the *natural productions* of the country. These are wholly different from the productions of the old continent. Most of them differ, both in shape and appearance, from those of every other part of the world. The quadrupeds in general are smaller and weaker: there are none equal in size to the elephant and the giraffe, and few so large as the camel or the horse. Some of the reptiles, however, are of enormous size. The woods have an infinitely more majestic appearance than the forests of Europe: they represent, in their various ages, the succession of centuries; and a new soil, of immense depth, is in some places formed by the remains of ancient vegetation. But what is chiefly remarkable in America, is the existence, beneath the surface of the ground, of the fossil or mineralized remains of immense quadrupeds. Nearly entire skeletons of a species of

carnivorous quadruped of greater size than any known existing animal, except perhaps the whale or the shark, have been found in the vicinity of the river Ohio. Grinding teeth have been discovered, which weighed as much as eight pounds each, and a leg bone, that measured a foot in diameter at the knob of the joint. The species of animals, however, to which these bones have belonged are now wholly unknown; nor does any authentic tradition whatever exist among the natives of the country respecting them.

Second Day's Instruction.

AMAZONIA AND RIVER AMAZON.

SOUTH AMERICA, of which I shall first speak, is an immense peninsula, four thousand five hundred miles in length, and three thousand miles in breadth. Its general features are more grand and magnificent, its mountains more stupendous, and its rivers are in general of greater width and extent, than those of the northern division of this hemisphere. The loftiest summits of its mountains, the *Andes*, are near the equator, and, to the depth of two thousand four hundred feet, are covered with perpetual snow. Three remarkable ridges stretch from the Andes eastward, parallel to the equator, and enclose three immense vallies or plains: of Oronoko, of the river Amazon, and the pampas or plains of Buenos Ayres. These are open to the east, but are closed by the Andes towards the west. The middle valley is clad with thick forests; but the other two are for the most part savannas, or grassy plains, with a few scattered trees.

The general division of South America is into nine provinces; of Amazonia, or the territory adjacent to the river Amazon, Guiana, Terra Firma, Peru, Chili, Magellanica, Terra del Fuego, Paraguay, and Brazil.

Many of these provinces are subject to European powers; are governed by viceroys; and, for the more convenient administration of justice, are divided into audiences, and subdivided into military districts.

We will commence our survey at the *River Amazon*, and, successively passing through the different countries north of that river, will proceed thence to the Isthmus of Darien. After this we will turn southward, and direct our course through all the countries of the western side of South America, till we arrive at Terra del Fuego. Thence we will return, along the eastern shore, northward, through Patagonia, Buenos Ayres, Paraguay, Brazil, and other countries, to the place whence we set out. And first with respect to

AMAZONIA,

Or the Country adjacent to the River Amazon.

THIS is an extensive district, about fourteen hundred miles in length, and nine hundred in breadth. It was first discovered by a Spanish adventurer, whose name was Orellana, and who, about the year 1540, had accompanied Gonzalo Pizarro, the governor of Quito, in an expedition to discover and subdue the countries east of the Andes. After having encountered almost incredible hardships, they arrived on the banks of the *Coca* or *Napo*, one of the rivers that falls into the Amazon. Here, with infinite labour, they constructed a bark, which they hoped might be useful in collecting provisions, and transporting them across the river. This vessel was manned by fifty soldiers, and the management of it was given to Orellana. He embarked in it with these men, but being soon carried by the rapidity of the current, to a great distance down the stream, he formed the bold and treacherous project of deserting his commander, and of making conquests and discoveries independent of him. With this view he proceeded onward, and, after a voyage of seven months,

attended by many dangers, he reached the ocean in safety. Thence he proceeded to Spain, and astonished all Europe with his extraordinary adventures. Among other things, he pretended that he had discovered nations among whom gold was so abundant that the roofs of their houses were covered with this metal; and that he had passed through a country inhabited by a republic of women who possessed all the warlike qualities of the ancient Amazons. It was from the latter circumstance that the country was called Amazonia, and the river, which the Indians had previously known by the appellation of the *Maragnon*, was named the *Amazon*.

This river, one of the most extensive in the world, rises from a small lake in Peru. It runs first southward, and then eastward. In its progress, it receives many tributary streams, and, after a course of more than three thousand miles, falls into the Atlantic. Some of the rivers that join it, are not inferior in size to the Danube or the Nile; and at its mouth the Amazon itself is nearly one hundred and fifty miles across. The country through which it flows abounds in various tropical productions; but the climate throughout its whole course is, for the most part, moist and unhealthy.

The Spaniards made several attempts to form settlements on the banks of this river, but they at last abandoned them, because they did not find there either gold or silver, the chief objects of their pursuit in America. The Portuguese have a few inconsiderable settlements near the mouth of the Amazon, but, with the exception of these, the native Indians are in possession of nearly the whole country. These Indians are numerous, and are governed by chiefs or caciques, whose regal ornaments consist of a crown of feathers, a wooden sword, and a chain of tigers' teeth or claws, suspended round the waist. Their weapons are bows and arrows, and flat-headed clubs. Some of them have shields, formed of cane closely platted: others use hatchets made of

stone; and the teeth and tusks of animals serve many of the tribes for chissels, awls, and other implements.

The following narrative will illustrate the geography of this extraordinary river, and the character of many of the Indians which inhabit its banks. It is taken from an account published by M. de la Condamine, a native of France, who with other philosophers, was employed in geographical discoveries in South America, between the years 1735 and 1743. This gentleman returned from Peru to Europe along the course of the Amazon.

Narrative of the Voyage of M. DE LA CONDAMINE *down the River Amazon, from Peru to Brazil.*

HE caused a kind of float to be formed on the bank of the river, for the purpose of carrying, with greater safety his instruments and baggage; and in the beginning of July, 1743, he embarked on it, under the conduct of several Indians. The place from which he embarked was not far distant from *Loxa*, a large town within the jurisdiction of Peru. The current flowed with great rapidity, and, in some places, the water was so deep that, with a line, near sixty feet in length, he could not reach the bottom.

He proceeded for several days without much interruption. In one instance, however, his float was driven into an eddy, and was whirled round and round for more than an hour, before it could be rowed into the main stream; and in another, it was in considerable danger from an unaccountable and sudden falling of the water. Within thirty-six hours it sunk twenty-five feet: the float was drawn, by the current, through a narrow passage, the rocky sides of which were nearly perpendicular; and against these it was several times in danger of being beaten to pieces. At length he arrived at a town called *Borja*. Here he found himself as it were in a new world, upon a sea of fresh water, and in a labyrinth of lakes, rivers, and canals,

that penetrated every way into an immense forest. Wherever he turned, new plants, new animals, and a description of men different from any he had hitherto seen, met his view. His eyes which, for seven years, had been accustomed only to mountain scenery, now beheld an extended horizon, scarcely interrupted by an eminence. Instead of the great variety of objects, which had diversified the cultivated plains of Quito, the prospect here was altogether uniform; it consisted only of water and verdure. He trod on the earth without being able to see it, so thickly was it overspread with herbs, plants, and bushes. Below Borja, for a distance of several hundred miles, a stone of any description is as great a rarity to the inhabitants as a diamond would be to us.

Borja was at this time inhabited partly by Indians, and partly by the descendants of Spaniards who had settled in Peru. Missionaries to convert the Indians to the Christian religion, were resident both here and in various parts of the adjacent provinces. M. de la Condamine was received into the house of one of them, and was treated by him with great kindness, during his continuance in Borja.

He left this place on the 14th of July, and, during the ensuing four days, passed the mouths of several rivers, one of which he estimated to be near eight hundred yards wide. On the 19th he arrived at a large village called *Laguna*, the principal seat of the missions in the province of *Maynas*. This village, which contained more than a thousand Indians capable of bearing arms, had been built on an elevated ground, in a dry soil, near the bank of an extensive lake, formed by the river *Guallaga*.

From Laguna M. de la Condamine was accompanied on his voyage by Don Pedro Maldonado, the governor of one of the adjacent provinces. They set out in two canoes, each formed of the single trunk of a tree, and proceeded night and day, in the hope of being able to overtake some large canoes which the Portuguese mis-

sionaries every year dispatched down the river for provisions. The Indians rowed all day; and at night the canoes were allowed to float along the stream, each having two negroes on watch, one at the head, and the other at the stern, to keep the vessel in the current.

In their course downward, the scenery was flat and uninteresting, and M. de la Condamine, for several days, chiefly occupied himself in ascertaining the course of the river, examining its depth, the various breadths of its channel, and the mouths of such rivers as fell into it; and marking all these on his maps.

On the 25th they stopped at one of the Spanish missions, inhabited by a race of Indians called *Yameos*. The language of these Indians was found extremely difficult of pronunciation to any but themselves. They drew in their breath when they spoke, and hardly sounded any vowel. Many of their words, which the voyagers could not write without using at least nine or ten syllables, appeared to be pronounced by them with only three or four. M. de la Condamine says, that in the language of the Yameos "Poettarrarorincouroac" signifies the number three; but, fortunately for those who have any intercourse with them, their arithmetic goes no further than this number. The Yameos, like most of the American Indians, are gluttons even to voracity, when they have a sufficiency of food; but when deprived of food, they will bear hunger for a long time without complaining. They are enemies to labour, and wholly regardless of the future. By hunting and fishing they have little difficulty in supplying their prevailing wants; and, when not under restraint, they give themselves up to a childish joy, which they express by skipping about and immoderate laughter. Their weapons consist of hollow tubes, and small poisoned arrows. The latter are made of the wood of the palm-tree, and have at one end a roll of cotton, which exactly fits the tube. These arrows they blow through the tube, and, at the distance of thirty or forty paces, they seldom miss the mark at which they

aim. So deadly is the poison into which the arrows are dipped, that, in less than a minute, they will kill any animal into the skin of which they have penetrated.

In their voyage on the 26th M. de la Condamine and his friend passed the mouth of the river *Ucayala*, one of the largest streams that falls into the Amazon. This river has its source in one of the upper provinces of Peru; and, at the place of its junction with the Amazon, it is broader than that river. Hence there is some doubt which of the two ought to be considered the principal stream. Below the Ucayala, the Amazon considerably increases, both in width and depth. The number of its islands also increases.

On the following day the voyagers landed at a mission called *St. Joachim*. This consisted of several Indian nations, particularly those of the *Omaguas*, a tribe, who, about a century before, had been extremely powerful, and had inhabited the banks and islands of the Amazon for nearly six hundred miles. Few were at this time left, and these were all under the jurisdiction of the Spanish government. The name of "Omaguas," signifies flat-headed, and was derived from a custom which prevails among these people of squeezing between two boards, the foreheads of their children immediately after they are born. The intention of this, according to their own account, is to flatten their faces, and give them a resemblance to the full moon. M. de la Condamine informs us, that the language of the Omaguas is pleasant to the ear, and easy both to be learned and pronounced. These people use the seeds of certain plants to intoxicate themselves with. They likewise have a kind of snuff, which they make of a herb dried and pounded. This snuff they use in a somewhat curious manner. They put it into a pipe, formed of reed, and ending in two branches, shaped like the letter Y. These branches they place in their nostrils, and then draw violently their breath, at the same time screwing up their faces in a very ridiculous manner.

M. de la Condamine says, that the trees and plants

which grow on the banks of the Amazon, and on the banks of the rivers which fall into it, are so numerous, that an examination of them would furnish employment for many years, to the most laborious botanist. All that M. de la Condamine could do was, as often as possible, to collect seeds of those which he saw. The plants, or rather shrubs, which seemed to him to be the most extraordinary of all, were those called Lianas, and in some parts of the country Nebees. They have nearly the appearance of ropes, and grow around such trees and shrubs as they happen to touch. When they reach the branches, which they often do at a great height, they shoot out filaments, and these dropping in a perpendicular direction, enter the earth, and take root afresh. Others, being carried obliquely by the wind, or being by some other accident forced against the trees, form a confusion of cordage, which, hanging down, and extending in every direction, has not unfrequently the appearance of the rigging of a ship. These Lianas the Indians use instead of ropes. They often make of them hanging bridges, on which they pass their rivers. Some of them are as thick as a man's arm, and, by tightly clinging round the trees which support them, the trees are killed. It not unfrequently happens that a tree withers away, decays, and wastes as it stands, so that there remain only the windings of the Lianas, which form a kind of wreathed column, that art would find it very difficult to imitate. Gums, resins, and balsams of various kinds, may here be obtained in great abundance, as well as different kinds of vegetable oils. In some parts of the country adjacent to the river, the Indians, instead of oil, use for their lamps a gum called copal, which they bind round with the leaves of the banana tree. Others, for a similar purpose, use certain seeds, which they put into the hollow of a pointed rod: they light the seeds, and stick the rod into the ground as a candlestick. The tree that produces the gum called caouchouc, or Indian rubber, is very common on the banks of the Amazon. Of this substance the Indians

form bottles, which cannot easily be broken: they also use it for making boots, and different kinds of bowls.

The voyagers changed both their canoes and attendants at St. Joachim, and set out from that place on the 29th of July. Two days after this they passed the mouth of the river *Napo*. It appeared to be about six hundred fathoms across, and was divided by islands into several branches. The width of the Amazon, at this place, was about nine hundred fathoms. The Indians, residing on the banks of the Napo, had never been completely subdued by the Spaniards; and they had more than once massacred the governors and missionaries who had attempted their subjugation.

At a little town called *Pevas*, the last of the Spanish missions, the voyagers landed. This place they found to be inhabited by many tribes of Indians, each of which had a different language. None of them had hitherto been converted to Christianity; but all were in an extremely wild and barbarous state. Many of them, by way of ornament, had the bones of animals stuck through their nostrils, or lips; and several had holes in their cheeks into which they stuck different coloured feathers. Some of them had the lower extremity of their ears extended to the length of four or five inches, and had a large hole in each, which they occasionally decorated by filling it with a nosegay, or a tuft of flowers.

Betwixt Pevas, the last of the Spanish, and *St. Paulo*, the first of the Portuguese missions, the voyagers did not see any habitation on either side of the river. They, however, passed several large islands, which had formerly been inhabited by the Omaguas. Here the river is of great width, and has an extremely rapid current. Considerable danger is experienced in the navigation of it, from the trunks of trees which have been carried down the stream, and, in some places, lie half buried in the sand or mud, under the water.

The voyagers proceeded without intermission, and arrived at *San Paulo* in three days after they had left

Pevas. At this place they were received and treated with so much kindness by the Portuguese missionary and monks, that they almost forgot they were in the centre of America, and more than a thousand miles distant from the countries inhabited by Europeans. Hitherto in the villages adjacent to the Amazon, they had seen only houses and churches that had been constructed of reeds; but, at San Paulo, these were built of stones, bricks, and earth, and were neatly white-washed. All the Indian females wore a kind of dress formed of British linen. These people had also chests with iron locks and keys; looking-glasses, knives, scissars, needles, combs, and other European articles, which they had procured from the settlements near the mouth of the river. In fact, the commerce of these Indians with Europeans, gave to them an air of ease and opulence which the voyagers had not before witnessed. Their principal articles of commerce were cacao or chocolate nuts, which they gathered from trees growing wild on the banks of the river, and with which they made regular voyages downward, to the distant settlements.

The canoes used by the Portuguese, in this part of the Amazon, were considerably larger than those of the Indians. Some of them were sixty feet long, and seven in breadth, and had two masts.

In one of these canoes the voyagers proceeded from San Paulo to *Coari*, one of six settlements occupied by Portuguese missionaries of the order called Carmelites; and, in their progress, they passed several large rivers which fell into the Amazon, and which were navigable to a considerable distance from their mouths. It was somewhere in the vicinity of Coari, that the Spaniards formerly pretended that they had seen many ornaments of pure gold upon the inhabitants. Hence they named one of the rivers "the golden river," and one of the Indian towns "the village of gold."

In the course of their navigation the voyagers had carefully examined the Indians of different nations, re-

lative to those Amazons, or warlike women, whom Orellana pretended he had met with and had fought on the banks of the river. These people asserted that their parents had informed them of the existence of such a race, stating, that they had lived by themselves, without any males among them; but that they had latterly retired far into the inland country. One Indian, who was about seventy years of age, informed the voyagers that his grandfather had seen a party of these females: they had come, he said, from the river *Cayamé*, which falls into the Amazon, and one of them had a child at her breast. Another Indian offered to show M. de la Condamine a river, which would have led him within a little distance of the spot at that time inhabited by the Amazons, or "women without husbands," as these people called them. All seemed to agree, that the place of their residence was among the mountains in the centre of Guiana, a region into which Europeans had not then penetrated. If the existence of the Amazons be at all credible, M. de la Condamine thinks it may be accounted for in the slavish lives of the women of America, and the resolution made by those of some of the tribes to escape from the hard yoke of their husbands, and provide for themselves a settlement where they could live in a state of independence. There can, he says, be no greater difficulty in accounting for this, than there is for the fact of slaves, when ill used or discontented, running away in whole droves into the woods, and there passing many years, sometimes even their whole lives.

On the 20th of August, the voyagers set out from Coari in another canoe, and with other Indians. They shortly afterwards passed, on the south, the mouths of the *Purus*, one of the largest rivers which flow into the Amazon. At the distance of seven or eight leagues below this river, the Amazon was free from islands, and between a thousand and twelve hundred fathoms wide. Here, with a line six hundred feet in length, M. de la Condamine endeavoured to ascertain the depth, but

was unable to reach the bottom. Two days after this they entered the mouth of the *Rio Negro*, or *Black River*, so called from its clear and limpid stream, distinguished from the whitish and troubled waters of the Amazon. The Rio Negro, like a sea of fresh water, falls into the Amazon on the north side. The voyagers ascended it, about two leagues, to a fort constructed on its bank by the Portuguese. This, the most distant settlement which the Portuguese possessed on the north side of the Amazon, had been established somewhat more than a century. Here they carried on an extensive trade in slaves, and had a detachment of soldiers constantly stationed for the purpose of keeping the Indians in awe, and favouring this traffic. At this fort M. de la Condamine was informed that there was a communication, by water, betwixt the Rio Negro and the Oronoko, and consequently betwixt the latter river and the Amazon, a fact which has since been ascertained, by several persons having navigated from one river to the other.

The limpid stream of the Rio Negro had hardly lost its transparence, by intermixture with the waters of the Amazon, when the voyagers passed, on the south side, the mouth of another river, not inferior to it in magnitude. The Portuguese had named it *Rio Madeira*, or "the river of wood," probably on account of the great number of trees which, at the time of its inundations, are floated down its stream. So great is the extent of this river, that, in the year 1740, some Portuguese adventurers ascended it as far as Santa Cruz, a Spanish episcopal see, in Upper Peru, and in seventeen degrees thirty minutes of south latitude. But the most remote source of the Madeira is near the mines of Potosi, and not far from the head of a river, which runs southward, and falls into the La Plata.

Below the mouth of the Madeira, the Amazon is, in some places, two or three leagues wide. It is here that the Portuguese first begin to give it the name of Amazon; for, higher up, they know it only by that of *Rio de Solimoes*, or the river of Poisons,

from the envenomed arrows of the Indians which inhabit its banks.

On the 28th the voyagers landed at a Portuguese fort called *Pauxis*, on the northern bank of the river, and at a place where the stream was confined within a strait, somewhat more than nine hundred fathoms in width. The ebbing and flowing of the tide was perceptible as far as this place, six hundred miles from the ocean. They were received at Pauxis with great hospitality, as indeed they had been in all the dominions subject to the king of Portugal. The commandant of the fort detained them four days, one of which they spent at his country seat, and he afterwards accompanied them to some distance on their voyage. In their progress, he pointed out to them a large island, the inhabitants of which were almost the only remains of a powerful nation called *Tupinambas*. This people, two hundred years before, had governed Brazil; and in that country their language was still retained. On the 4th of September M. de la Condamine saw some mountains towards the north, at the distance of twelve or fifteen leagues from the river. This was a novel sight to him, for, during the preceding two months, he had floated through a perfectly flat and wooded country. The mountains he now beheld were the extremity of a long ridge, the summits of which are the points whence the waters of the Guiana take their rise.

On the 6th they reached a Portuguese fort called *Paru*. This was on the north side of the river, and had lately been rebuilt on the ruins of an old fort, constructed by the Dutch. At the mouth of the river *Xingu*, a little below this fort, the breadth of the Amazon is so great that it would have been scarcely possible to see across it, even if the numerous islands which occur there, had not intercepted the sight. The force of the water, at the junction of the Xingu and Amazon, is such that many canoes are lost in passing it. The latter river rises in Brazil, and, with the exception of a cataract at the distance of seven or eight days sail

from its mouth, is navigable for several hundred miles. Hitherto the voyagers had suffered much inconvenience from the stings of musquitoes; but in their progress from Paru they were free from the attacks of these insects, in consequence of the canoe being kept at a considerable distance from the bank of the river.

At *Curupa*, a little Portuguese town, M. de la Condamine and his friend were received by the lieutenant of the fort with extraordinary honours, and were entertained for three days with a magnificence which bordered upon profusion. At this place the ebbing and flowing of the tide is very perceptible; and boats can only go up the river with the rising water. Some leagues below Curupa is the large island of *Joannes*, or *Marayo*, formed by the main channel of the Amazon on the north, a branch of that river on the west, a large river of Brazil called *Rio Tioçantin* on the south, and the ocean on the east.

The voyagers were conducted from Curupa, between several islands, and by narrow winding channels, to the Portuguese town of *Para*, situated about one degree south of the equator. They reached this town on the 19th of September, about ten weeks after the first embarkation of M. de la Condamine on the Amazon. After they had landed, they were conducted to a house dependent on the college of Jesuits. Here they were kindly received by the provincial of the college, who provided a lodging for them in the town. This lodging was richly furnished, and had a garden, from which they had a full view of the sea. On entering Para, immediately after leaving the woods of the Amazon, they could almost have fancied themselves transported into Europe. They found themselves in a large city, with streets finely laid out, handsome houses, and magnificent churches. Some of the houses were of stone, and had lately been rebuilt.

A direct intercourse subsisted between Para and Lisbon, whence every year a fleet of merchant ships arrived, which supplied the colonists with all such Eu-

ropean productions as they were in need of. The exports from this place consisted of gold dust, brought from the inland parts of Brazil, and of various tropical productions, such as sarsaparilla, vanilla, sugar, and coffee, but principally of chocolate-nuts. The latter were used as the current money of the country, and chiefly conduced to the riches of the inhabitants.

M. de la Condamine was detained in Para till nearly the end of December, when, being desirous of examining the mouths of the Amazon, and thence proceeding to Cayenne, the commandant of Para supplied him with a canoe and twenty-two rowers, together with all the refreshments and conveniences that could be requisite for the voyage, and recommendations to persons resident in different places at which it might be necessary for him to stop.

Some leagues below Para, M. de la Condamine crossed the eastern mouth of the Amazon, or that branch of it which is separated from the main stream by the island of *Marayo*. This island occupies the whole space between the two mouths of the river. It is of irregular shape, and upwards of four hundred and fifty miles round. The branch of the river which M. de la Condamine crossed below Para, was about three leagues wide, and increased in width as he approached the sea. He coasted along the island till he came to its south-eastern extremity, called *Cape Maguari*, after which he turned to the west, keeping still along the coast of the island, for more than forty leagues, in a direction hardly deviating from that of the equinoctial line. He passed also within sight of two large, but now uninhabited, islands, which he left towards the north, one called *Machiana*, and the other *Caviana*.

The soil, not only of both these islands, but also of Marayo, was entirely drowned, and almost uninhabitable. Beyond Caviana M. de la Condamine entered the true channel, or main stream of the Amazon. At this place it would be impossible for the Indians to cross the river in their canoes, if the channel were not

divided by several small islands, under which they could obtain shelter, and watch their proper times for passing from one to the other.

On the northern bank of this branch of the river is a Portuguese fort, called *Macapa*, adjacent to which the whole bank of the river was covered with trees. The interior of the country was open and level; and vast open plains extended thence to the sources of the river *Oyapoc*.

Between Macapa and the *North Cape*, in the part of the river where the main stream is most confined by the intervention of islands, the tide of flood exhibits an extraordinary phenomenon. During the three days nearest to the new and full moon, at the season of the spring tides, the sea, instead of flowing near six hours, as it does at other times, rises to its greatest height in a minute or two. But it may be imagined that this cannot happen quietly. At the distance even of more than a league, a dreadful noise is heard, occasioned by the sudden approach of the torrent. As it draws nearer, the noise increases; and, in a short time, a liquid promontory, between twelve and fifteen feet in height, is to be seen, rapidly advancing. This is followed by a second, and that by a third, and sometimes a fourth, occupying the whole width of the channel. This prodigious mass of accumulated waters, rushing forward with inexpressible rapidity, breaks down and carries before it every obstacle. Ships have no other mode of securing themselves from the fury of the torrent, than by casting anchor in places where there is great depth of water. The cause of this phenomenon has been ascribed to the opposition which the waters of the ocean suffer from being pent up, in their progress, within the narrow channels between the islands.

After experiencing much difficulty and many interruptions on the passage from Macapa, in his voyage northward, M. de la Condamine, after two months navigation, reached the harbour of Cayenne

on the 26th of February, 1744, whence he shortly afterwards departed for Europe.

Towards the conclusion of his narrative, M. de la Condamine speaks of the various natural productions that he had seen in the course of his voyage. He mentions, among others, a kind of Manati, or sea cows as he calls them, which inhabit the river and feed on the grass growing upon its banks. These animals, he says, are amphibious, though they seldom come entirely out of the water; are of large size, and have two fins near the head, shaped somewhat like small wings. They are found in the Amazon, the Oronoko, and other rivers of America. He also saw here a species of fish called electric eel, which has the property, when touched, of giving a shock to the hand, like that of an electrical machine. In the Amazon turtles were so numerous, and of such various kinds and sizes, that these animals and their eggs would alone have afforded a sufficiency of food for all the people who inhabited its banks. There were also some kinds of land tortoises, which were much esteemed as food. The lakes and marshes, near the banks of the Amazon, were filled at the overflowing of the river, by innumerable kinds of fish; and, during the dry season, when the waters receded within their banks, the fish remained in these lakes, where the Indians were able to catch them without difficulty. Alligators, some of which were twenty feet and upwards in length, were found through the whole course of the Amazon, and even in most of the rivers that fell into it. These animals, says M. de la Condamine, sometimes lie for hours, and even for whole days, stretched out and motionless upon the sand banks of the river: so that persons, not accustomed to them, would mistake them for trunks of trees, or long pieces of timber, covered with a rough and scaly bark.

In the forests, near the banks of the river, many kinds of quadrupeds are found. Among others M. de la

Condamine mentions one, which he calls an elk, and another, a species of weasel, called coati mondi. But the most common species that are in request among the Indians for food, are monkeys.

In his navigation down the river M. de la Condamine had seen so many of these animals that it would have been difficult even to enumerate them. Some were as large as greyhounds, and others as small as rats. Many of them had tails twice as long as their bodies, and, in their habits, were excessively agile and sportive. Wild boars, rabbits, ant-eaters, porcupines, sloths, and armadillos, were not uncommon in the woods. Serpents and reptiles every where abounded. Large bats, which, during the night, suck the blood of horses and mules, and even of men, if they sleep in the open air, were so common, that at Borja and other places, they had entirely destroyed the great cattle that the missionaries had introduced there. The number of birds in the forests adjacent to the river, seemed to surpass that of the quadrupeds. The plumage of most of them was extremely beautiful and brilliant, but their notes were, in general, harsh and unmusical.

Third Day's Instruction.

GUIANA.

Portuguese Guiana—Cayenne—Dutch Guiana—Surinam.

The country adjacent to the ocean, and extending from the mouth of the Amazon to that of the Oronoko, and occupying an extent of four hundred leagues, has the name of *Guiana*, and is possessed by five European powers, the Portuguese, the French, the Dutch, the English, and the Spaniards.

A great portion of this vast country is unknown;

consequently any general description of it must be extremely imperfect. The climate is for the most part hot and moist. From November to July the weather is tolerably mild; but, during the rest of the year, the heat is intense, though it is somewhat mitigated by sea breezes. The rainy and dry seasons constitute the summer and winter in Guiana; and in no part of the year does the length of days vary more than about forty minutes. Ridges of lofty mountains, and lower grounds intersected by marshes and extensive savannas or grassy plains, are thinly inhabited by various tribes of Indians. The borders of the numerous rivers, by which the country is watered, are the parts that have been chiefly appropriated to plantations and culture; and these yield an abundance of cocoa, coffee, sugar, and cotton. The maritime districts are low and fertile, but are frequently inundated.

Along the coast, the waters of the ocean flow continually with a current towards the north-west; and the shore is, in many parts, rendered inaccessible, from its being lined with dangerous quicksands, banks, and rocks.

Portuguese Guiana.

THE Portuguese have long possessed a settlement on the north side of the Amazon. This is known by the name of *Portuguese Guiana*, and is divided from the French colony by the river *Carpana*. Its length, from east to west, is upwards of six hundred miles, and its breadth about two hundred and forty. The greatest part of this extensive region is occupied by savage tribes, whose names even are scarcely known. There are many Portuguese forts and missionary stations, in different parts. Some of these extend as far towards the west as the Rio Negro, the present western boundary of this settlement. Portuguese Guiana has of late been annexed to the government of Brazil.

French Guiana, or Cayenne.

BEYOND the Portuguese territory we enter *French Guiana*, or *Cayenne*. This settlement, which lies between two degrees, and six degrees twenty-four minutes of north latitude, and extends upwards of three hundred miles along the coast, was first formed in the year 1635. The country adjacent to the coast is low and marshy, and subject to inundations from numerous rivers, the waters of which rush down the mountains with great impetuosity. The mud that is carried along the rivers, during the rainy season, extends to a great distance at the bottom of the sea. Hence, and from the extreme shallowness of the water, large vessels cannot approach Cayenne without danger, and ships of war are often obliged to lie at the distance of two or three leagues from the shore. This muddy bottom stretches along the whole margin of the sea, from the island of Cayenne, where the capital is situated, to the river Amazon; and, in the whole of this extensive tract, not a stone is to be seen. In the *interior* there is a chain of low hills covered with wood. Some of these are said to be extinguished volcanos: on the summit of one of them there is a small lake in which are found a great number of alligators.

The *soil* of this colony is, in many parts, extremely fertile; and the *productions*, on the whole, are of excellent quality. Among others may be enumerated sugar, cocoa, coffee, and indigo: cassia, castor-oil, balsam of capivi, quassia, ipecacuanha, and caouchouc, or Indian rubber. Cayenne pepper is a noted produce of this country, which many of the inhabitants use to excess. The most important kinds of grain are maize and rice. On the savannas, or grassy plains of the interior, a great number of horses, sheep, goats, and cattle are bred; and the beef and mutton are considered to be excellent.

In the interior there are many *Indian tribes*. Of these

the men are in general of middle stature, but the women are shorter, and not so well proportioned as the men. They generally stain their skin of a red colour with roucou or arnatto, not only for the sake of ornament, but as a defence against the stings of musquitoes. They reckon their time by the revolutions of the moon and stars; and some of them play on a kind of flute, which produces a sound resembling the bellowing of an ox. It is said to be customary for the females of several of the tribes to choose their husbands by presenting drink, the acceptance of which constitutes nearly the whole marriage ceremony. So great is the disinclination of these Indians to restraint, that no inducements will prevail with them to enter into the service of the colonists, or to perform any of the duties of agricultural labour. Their apathy, when afflicted by disease, is very remarkable. Nearly half the population of one of their villages had fallen victims to an epidemic complaint: they refused every humane offer that was made to them, would take no medicines, would submit to no regimen, and, with the utmost indifference, resigned themselves to their fate. It is a singular trait in their character, that, although when thus attacked by illness, they will take no trouble to escape death, yet in health they are so extremely active and persevering, that no difficulties can intimidate them.

Cayenne, the capital of the colony, the seat of government and of the courts of justice, is situated close to the sea on an island, and near the mouth of a river of the same name, which is there about a league in width. The town is small, and is surrounded by a swampy moat and wretched walls, that form a sort of irregular hexagon. The fort, which commands the town, is constructed of earth, and is tolerably strong towards the sea, though, from the shallowness of the water, only ships of middle size can approach within gunshot of it. The palace of the government, and the ancient mansion of the Jesuits, are the only buildings in the town that are deserving of notice. These form two fronts of the place

of parade. The latter is bordered by two rows of large orange-trees, which exhale an exquisite fragrance, and are crowded with humming birds, that fly about them and skip among the branches. The entrance into the harbour of Cayenne is through a narrow channel, and ships can only pass in at high water.

A new town has lately been erected on a neighbouring savanna, and is separated from the old one only by a ditch. This is constructed on a regular plan. The streets are wide, and contain some elegant houses, the appearance of which becomes the more striking, from the obvious marks of poverty and wretchedness that are exhibited by almost every thing around them.

The *island of Cayenne* is five or six leagues in length, and three or four in breadth. It is more elevated than any part of the adjacent coast, and has a black and tolerably fertile soil. The eminences are cultivated, and their bases are covered with pastures. Some tracts are wooded, and others are intersected by morasses. Its productions are similar to those of the continent of Guiana; but not so abundant.

The climate is in general healthy; but there is a prevailing opinion of the contrary. This took its rise from an unfortunate expedition to *Kourou*, about twelve leagues below Cayenne, which, in the year 1763, was undertaken by command of the duke de Choiseul, then prime minister of France. He sent about ten thousand persons, unprovided even with such articles as were necessary for their subsistence, and, in the most rainy season of the year, to people the immense deserts of French Guiana. This multitude of adventurers, after encountering in their voyage, and subsequently to their arrival, innumerable inconveniences and hardships, fell victims, as it was said, to the insalubrious climate. Hence an erroneous opinion was entertained in France, which ruined the colony of Cayenne, by preventing the government from paying the least attention to it for several years afterwards.

During the early part of the French revolution, many

distinguished individuals were banished to this colony from France. These, on their arrival, were removed to a fort on the bank of the river *Sinimary*, about thirty leagues eastward of the capital; and in this fort they were confined in miserable rooms, that had formerly been used as prisons for fugitive negroes and criminals. Several of them, however, contrived to escape to North America, and thence to England, where they received the protection of the British government.

In Cayenne there are properly only two *seasons*, the dry and the rainy season. The former of these continues from the beginning of June, to the end of September, during which time the heat is generally very oppressive. The heavy rains begin to fall in the month of October, and these are frequent from December till March, from which time they begin gradually to decrease till the dry weather sets in. During the rainy season the heat is as moderate as can be expected in a country so near the equator as this.

The number of *inhabitants* in the whole colony, has been estimated at about nine hundred whites, four or five hundred mulattoes or people of colour, and nine thousand negroes.

Dutch Guiana.

If we proceed in a westerly direction from Cayenne, we enter what is usually called *Dutch Guiana*. This is at present possessed partly by the Dutch and partly by the English, the former having the colony of Surinam, and the latter the colonies on the rivers Demerara, Essequebo and Berbice. The whole formerly belonged to the Dutch but in the year 1803 it was surrendered to the British forces, and at the general peace, Surinam only was given up to its former possessors.

The coast of Dutch Guiana is upwards of one hundred and forty leagues in its whole extent; and the country, to the distance of about fifty miles from the sea, is

every where flat and level; and so low that, during the rainy season, many parts of it are inundated to the depth of nearly two feet. These inundations, have produced an effect similar to that of the prolific inundations of the Nile: by a deposition of mud, they have occasioned the gradual formation of a rich soil, upwards of twelve inches in depth. This is a perfect manure, and as such, a ship load of it was once exported to the island of Barbadoès; but the wood-ants, which here are very numerous, committed such ravages in the vessel, that a repetition of the project was not attempted. The soil in the inland and elevated parts of the country, though fertile, is less productive than this. These, however, are clothed with lofty ever-verdant forests, which afford many kinds of timber, valuable for solidity, weight, duration, and ornament.

Notwithstanding the proximity of this country to the equator, it enjoys a more regular and uniform temperature than most of the tropical regions. The constant regularity of the trade winds during the day, and of the land breezes in the evening, joined to the quick return, and almost invariable length of the nights, with their refreshing dews, greatly moderate the heat. Dr. Bancroft, who was resident here some time, says, that the heat is less oppressive in this part of Guiana, than it is in the island of Barbadoes, one of the most temperate of the tropical islands.

At the termination of the rainy season, when the mud is gradually dried up, it stagnates and corrupts. In consequence of this the atmosphere becomes replete with noxious particles, and putrid fevers are then prevalent through all the watery districts.

Surinam.

On crossing the river *Menawina*, we enter the low and morassy country of *Surinam*. This is now a colony belonging to the Dutch. It extends from the Mana-

wina, about a hundred and sixty miles, as far as the *Corantine;* and it is indebted for its name to the river on the banks of which the first settlements were formed. The mouth of this river, which is still called the *Surinam*, is in about six degrees of north latitude, and is nearly four miles broad. There are numerous other rivers in the colony, but few of these are navigable. Even the Marawina, though of great width and extent, is so shallow, and so much crowded with rocks and islands, that no large vessel can pass up it. The colonists are dispersed only on the banks of the Surinam, and of such streams as flow into it; and *Paramaribo*, the chief town, is situated on its western shore, at the distance of about fifteen miles from the sea.

The following narrative will supply us with some interesting particulars relative to this colony and its inhabitants.

Narrative of a five years expedition against the Revolted Negroes of Surinam, from 1772 *to* 1777. *By Captain* J. G. STEDMAN.

IN the year 1772 accounts had been transmitted to Holland, that a considerable body of slaves, who had deserted from the plantations, had armed themselves, assembled in the forests, and had become extremely formidable to the colony of Surinam. It was consequently resolved to send from Holland a military force, for the purpose of quelling the rebellion: Mr. Stedman, who had accepted an ensign's commission in a Scot's regiment serving in Holland, volunteered his services on this occasion. These were accepted, and he was appointed to the rank of captain under General Fourgeoud, a Swiss officer, the commander-in-chief of the expedition.

The vessels sailed in the month of December, and on the 2d of February, entered the *Surinam*. Their first anchorage was before a fortress on the eastern bank, called *Amsterdam*. All the men on board were

in the highest spirits on seeing themselves surrounded by a beautiful and verdant country. The river was crowded with boats and barges; whilst groups of naked boys and girls were playing and swimming about in the water, like so many tritons and mermaids. Nothing was to be heard on board the ships but music, singing, and mirth. The scene was new to every one, and the delightful sensations arising from it were increased by the fragrance of the lemon and the orange flowers, that was wafted on the breeze from numerous plantations which lined the banks of the river.

During the continuance of the vessels at this place, the companies frequently walked on shore, and Captain Stedman often accompanied them in their excursions. But the pleasure which he had flattered himself he should receive, from exchanging the confinement of a ship for the liberty of ranging over a delicious country, was damped by one of the first objects that was presented to his view after he had landed. This was a young female slave, whose only covering was a rag tied round her loins, and whose skin was lacerated in several places by the stroke of the whip, for the non-performance of a task to which she was apparently unequal; she had been sentenced to receive two hundred lashes, and to drag, during some months, a chain several yards in length, one end of which was locked round her ancle, and the other was affixed to a weight of at least a hundred pounds.

On the 8th of February, the vessels sailed up the river, with drums beating, colours flying, and a guard of marines drawn up on the quarter-deck of each. It was not long before they reached *Paramaribo*, the capital of the colony. The woods adjacent to this town were adorned with luxuriant verdure; the air was perfumed with the fragrance of aromatic flowers, and the whole scene was gilded by the rays of an unclouded sun. On the ensuing day the soldiers, five hundred in number, and all young men, were landed. They were paraded on a green plain between the town

and the citadel, and opposite to the governor's palace; but the heat was so oppressive, that many of them fainted. After this they were marched into quarters prepared for their reception.

The officers were invited by the governor to dinner. They accepted the invitation, and in this repast the choicest viands of America and Europe were served up in silver; the richest wines were poured out with profusion; and the most delicious fruits constituted the dessert. The servants, or rather the slaves who waited upon the company, were handsome negro and mulatto females. According to the custom of the country, these were naked from the waist upward; but the other parts of their persons were arrayed in beautiful Indian chintzes, and they were ornamented with golden chains, medals, beads, bracelets, and sweet-smelling flowers.

On the day after his arrival, Captain Stedman was conducted, by the quarter-master of the regiment, to a neat habitation appropriated to his use. It was yet unfurnished, but was not destitute of inhabitants; for, having left his captain's commission in one of the windows, he had the mortification the next morning to see that it had been devoured by rats. When he awoke in the morning, he found that his face, breast, and hands were covered with red and itching spots. These had been occasioned by myriads of musquitoes, which had assailed him during the night, but the stings of which, in consequence of his profound sleep, he had not at the time perceived. These insects, during the rainy season, are inconceivably numerous in Surinam. No persons are secure from their attacks, but strangers are chiefly annoyed by them. Many of the wealthy inhabitants employ slaves to fan them all night. Others sleep in beds that have gauze doors, or are surrounded by gauze or muslin curtains. The generality of the people of Surinam sleep in cotton hammocks, covered with a large thin sheet, suspended from a tight line immediately over them.

Dissipation and luxury appear to be congenial to the inhabitants of this hot, humid, and enervating climate; and great numbers of persons annually fall victims to their own imprudence. This is peculiarly the case with the men. The women, though their complexion soon becomes sallow, and their skin shrivelled, generally outlive their husbands.

Captain Stedman thus describes the habits of a planter of Surinam. He generally leaves his hammock about six in the morning, when he makes his appearance under the piazza of his house. Here coffee is waiting for him. This he generally takes with his pipe, and he is attended by half a dozen of his finest slaves, both male and female, to serve him. He is next accosted by the overseer of his plantation. This person informs him what work was done the day before; what negroes had deserted, died, fallen sick, recovered, were bought, or born; which of them had neglected their work, affected sickness, or had been drunk or absent. The latter, in many instances, are brought up and flogged in the presence of their master, without even being heard in their own defence. The instruments of torture, on these occasions, are long hempen whips, that cut round the body at every lash, and crack like pistol-shot. After all the business of the plantation has been arranged, the planter saunters out in his morning dress, which consists of a pair of the finest holland trowsers, white stockings, and red or yellow morocco slippers; he has the neck of his shirt open, and no other upper garment than a flowing night gown of the finest India chintz. On his head is a cotton night-cap, as thin as a cobweb, and over that an enormous beaver hat. After having loitered about his estate, or sometimes ridden on horseback to his fields, he returns about eight o'clock, when, if he go abroad, he dresses; if not, he continues in his morning-dress. In the former case, he exchanges his trowsers for a pair of thin linen or silk breeches. He then sits down, and holding out first one foot and then the other, a negro boy puts on

his stockings and shoes; another negro dresses his hair or wig, and shaves him, and a third fans him, to keep off the musquitoes. Lastly, he puts on his coat and waistcoat, which are very thin, and of white colour. If his intention be to stay at home, he goes to breakfast about ten o'clock: for this meal a table is spread with ham, hung-beef, fowls or pigeons broiled; plantains and sweet cassavas roasted; bread, butter, cheese, and other food. And with these he drinks beer or wine; and he is served by the most beautiful slaves that can be selected. After this he takes a book, plays at chess, or billiards, or perhaps entertains himself with music. In the heat of the day he retires to his cotton hammock, where he sleeps for about a couple of hours, and is fanned all the time by black attendants, to keep him cool. About three o'clock he awakes, and, having washed and perfumed himself, he sits down to dinner. Here nothing is wanting that the country can afford, of meat, fowls, venison, fish, vegetables, fruit, &c. and the most exquisite wines are often squandered in great profusion. A cup of strong coffee and a liqueur finish the repast. At six o'clock, he is again waited upon by his overseer, and gives the necessary orders for the work of the ensuing day, and he spends the evening at cards, or some other amusement, drinking weak punch or sangaree, and smoking tobacco.

This is the character of many of the planters, not only of Surinam, but of other parts of America and the West Indies; yet there are many who possess very exalted virtues. In no country, says Captain Stedman, is hospitality practised with greater cordiality, or less ceremony, than in Surinam. Here a stranger of respectability is every where at home, and he finds a table and bed for him at whatever estate necessity or choice may occasion him to visit. This is a circumstance the more to be regarded, as, in this colony, there are no inns.

Paramaribo is a neat and pleasing town, situated, as it has been already observed, on the western bank

of the Surinam, and is built upon a kind of gravelly rock, level with the rest of the country. It is in the form of an oblong square, and is about a mile and a half in length. All the streets are straight, and are lined with orange, shaddock, tamarind, and lemon trees, which bear an abundance of odoriferous flowers and fruit. The streets are not paved, but are one continued and excellent gravel walk, rendered hard by having the surface strewed with sea-shells. The houses, some of which are two and others three stories high, are nearly all built of timber, and roofed with thin boards called shingles. Instead of glass for the windows, frames covered with gauze are sometimes used; and sometimes there are only shutters. None of the houses have chimneys, for no fires are lighted except in the kitchens. These are always at a little distance from the dwellings: and in them the food is cooked upon the floor, and the smoke is let out by a hole in the roof. Most of the houses have wells, but these yield only a brackish kind of water, which is seldom used for drinking, except by the negroes and cattle. All the Europeans have reservoirs or cisterns, in which they preserve rain-water for their own consumption.

Most of the houses at Paramaribo are elegantly furnished with paintings, gilding, glass chandeliers, china jars, &c. The rooms are never either papered or plastered, but are beautifully wainscotted with cedar, mahogany, or Brazil-wood. The number of buildings is computed at about one thousand four hundred, and of these the principal is the governor's palace. When Captain Stedman was here, this edifice, and that of the commandant of the place, were the only brick buildings in the colony. The town-hall was an elegant structure, covered with tiles. In this the different courts of justice were held, and underneath it were prisons for European delinquents.

Paramaribo is a very animated place. The streets are generally crowded with planters, sailors, soldiers, Jews, Indians, and negroes; while the river is covered with

canoes, barges, and other vessels, many of which have bands of music on board. The shipping also in the road, adorned with their different flags, form a very pleasing appearance. All this gaiety and variety of objects serve, in some degree, to compensate for the inconveniences of the climate. The carriages and dress of the inhabitants are truly magnificent. Silk embroidery, Genoa velvets, diamonds, gold and silver lace, were, at this time, daily worn; and even the masters of trading ships appeared with buttons and buckles of solid gold. The inhabitants were equally expensive at their tables, where every delicacy that could be procured was served up in plate and china of the finest workmanship.

Butchers' meat, fowls, fish, and venison, were very abundant in Paramaribo; and the country abounded in vegetables; but provisions in general were excessively dear. Wheat flour was sold from fourpence to one shilling a pound; butter at two shillings; and butcher's meat was never under a shilling a pound. Fish and vegetables, however, were cheap, and fruit could be had almost for nothing. Forty oranges could be purchased for sixpence; pine-apples for a penny each, and limes and tamarinds might be had for gathering. House-rent was excessively high: a small room, unfurnished, would cost three or four guineas a month; and a house, with two apartments on a floor, could be let for a hundred guineas a year.

The Europeans of this colony reside principally in the town. These, in the year 1773, were computed at five thousand persons, including the garrison; and the negro-slaves were about seventy-five thousand.

Paramaribo is not fortified, but it is defended by the river on the south-east; by a large morass on the west; by an impenetrable wood on the north; and on the north-east it is protected by a citadel, called *Fort Zelandia*. When Captain Stedman was here, there was no passable road for carriages to a greater distance from the town than about three English miles. The

woods abounded in macaws; but these birds, in Surinam, are called ravens, from their proportion in size to the parrots, which are here considered a kind of tropical crows.

Fourth Day's Instruction.

GUIANA CONTINUED.

Continuation of CAPTAIN STEDMAN'S *Narrative of an Expedition in Surinam.*

IT is requisite now to speak of those insurrections of the negroes of Surinam, which had occasioned the voyage to this colony of Captain Stedman, and the troops that he had accompanied.

From the earliest periods some fugitive negroes had taken refuge in the woods. By degrees their numbers increased; and, by pillaging the estates, they had obtained possession of lances and muskets. With these, in addition to their usual weapons, they had been enabled to commit incessant outrages and depredations on the coffee and sugar estates.

Many of the rebel negroes had settled near the upper parts of the rivers *Copename* and *Seramica*. Previously to the arrival of Captain Stedman, several additional revolters had settled among the woods, near the river *Cottica*, and were commanded by a desperate negro, named Baron. At length they became so formidable, that, in the year 1772, a general massacre of the planters in the country was feared. Many of the planters, consequently, fled from their estates, and crowded into the town of Paramaribo for protection. The position occupied by the rebels was peculiarly strong, because, like an island, it was surrounded by a broad and almost

unfordable marsh or swamp, which prevented all communication, except by private paths, overflowed with water, and known only to themselves. This position, which was called *Boucou*, and was between the river Cottica and the sea, was also defended by strong pallisadoes driven into the ground, and by loaded swivel guns. It had been attacked, and with great loss had been taken by the troops of the colony, previously to the arrival of the present expedition; but Baron, and a considerable number of his men, had escaped into the woods.

Colonel Fourgeoud, after he had been some time at Paramaribo, set out in a barge to inspect first the situation of the rivers Comewina and Cottica, and subsequently to explore the river of Surinam. In the mean while Captain Stedman, and most of the troops, remained at Paramaribo, in a state of inaction. At this place, and at several estates in the neighbourhood, he was witness to numerous acts of cruelty, practised by the overseers of the plantations upon the negro slaves, which filled him with horror and indignation.

While he was at Paramaribo, Captain Stedman became attached to a young, beautiful, and amiable mulatto slave, whose name was Joanna, the daughter of a respectable person of the colony, and whom he shortly afterwards married.

The troops had not been long in Paramaribo, before great numbers of them were attacked by fever. They had been a corps of the healthiest young men that had ever sailed from Europe; but their complexions were now sallow, and they were daily sinking into the grave. The hospitality of the country, and the almost incessant dissipation, which was the consequence of this hospitality, were to them the most deplorable misfortunes they could have experienced.

Much uncertainty had prevailed respecting the necessity of employing these troops against the rebels, as it was supposed that the latter had been so much

reduced in number as to be no longer formidable. A circumstance, however, occurred, which rendered it necessary to call the troops into immediate action. A strong party of rebels had suddenly attacked a lieutenant, whose name was Lepper, and had cut to pieces him and his whole company, consisting of about thirty men. The intelligence of this melancholy event, threw the whole colony into the utmost consternation; and all the officers and men, under the command of Colonel Fourgeoud, were ordered to be in readiness at a moment's warning for actual service.

Though by sickness and death they had been reduced in number, from five hundred to about three hundred and fifty, they were embarked, in the beginning of July, in half a dozen old sugar barges. Each of these was armed with swivel guns, blunderbusses, and other weapons, and was furnished with a month's provisions; and each had a sloping roof formed of boards, which gave it the appearance of an immense coffin. One of them was sent to a place called Jew's Savanna, and the others were directed to cruise about the upper parts of the rivers. The command of two of the barges was given to Captain Stedman. Each of the latter had a pilot, and was rowed by ten negro slaves; and on board the two, there were sixty-three persons, besides himself and a negro boy. His orders were to cruize up and down the *Cottica*, for the purpose of preventing the rebels from crossing that river, of attacking them wherever it was possible to do so, and protecting the estates from their invasion.

The rainy season had now commenced, and there were frequent showers, accompanied by loud claps of thunder. The barges, to which Captain Stedman had given the names of the Charon and Cerberus, were rowed up the Cottica. They continued their progress for several days, and passed many beautiful coffee and sugar estates, on the banks of that river. At length they arrived at the mouth of *Cormoetibo Creek*, a place

which had been fixed upon by Colonel Fourgeoud as a principal station for the rendezvous of the troops. No place could be more dismal or solitary than this: nothing was to be seen but water, wood, and clouds. A shed was constructed on the shore for the men to cook their food in; and, a few days afterwards, another was built, for the same purpose, about thirty miles further down the river, at a place called *Barbacoeba*. For some time Captain Stedman continued to cruise in the river betwixt these two places. One night, after it was dark, the sentinel called out, that he saw a negro, with a lighted tobacco-pipe, cross the Cormoetibo Creek in a canoe. Instant preparations were made for attack; but this suspected foe proved to be only a luminous insect, called a lantern-fly, which had flown across the river.

The men in both vessels now became very sickly; and, to add to this misfortune, accounts were received that a strong detachment of rebels was not far distant. The rain also poured like a deluge, and set almost every thing afloat in the vessels: and the air was filled with myriads of musquitoes. These, from sun-set to sun-rise, annoyed the crews of the vessels; they prevented them from sleeping, and left them besmeared with blood. The banks of the rivers were so thickly covered with wood, down to the water's edge, that not a footstep of land could be seen.

By the advice of an old negro, whom he had on board his barge, Captain Stedman was induced to swim in the river twice or thrice every day. From this practice he derived great benefit, though he was exposed by it to no small danger of attack from alligators, and, from a large and voracious kind of fish, which are very numerous here. The same negro advised him to exercise himself constantly in walking bare-footed and thinly dressed on board the barge. The intention of this was to harden his feet, and enable him to bear exposure to the atmosphere: and to a perseverance in

these practices Captain Stedman believed, that he was subsequently indebted for the preservation of his life.

At a military post, called *Devil's Harwar*, which had been previously established to defend the upper parts of the Cottica, Captain Stedman formed a kind of hospital for his sick men. The weather continued in every respect unfavourable. The men's clothes and hammocks, from constant exposure to wet, were rotting from day to day; and the men themselves began to be much in want of refreshment. Their heated and crowded state, on board the Cerberus, became so injurious, that Captain Stedman says they could be compared to nothing more appropriately than to the unfortunate persons who were confined in the Black Hole at Calcutta. For fresh provisions they were obliged to have recourse to the flesh of monkeys, and of such other wild animals as they could kill.

In the midst of their hardships, however, they were one day gratified by discovering a small tree, which bore a delicious fruit, somewhat larger than a hen's egg, and of a golden yellow colour. This, when broken, as one would break an egg, was found to inclose a kind of jelly, which was sweet, mixed with acid, of exquisite flavour, and so cool that it might be considered like iced marmalade. In the part of the river where this tree was found, Captain Stedman observed a great number of beautiful butterflies, particularly some which were exceedingly large, and of an azure blue colour. Between the showers they skimmed about, and hovered among the green boughs, to which their ultramarine hue, brightened by the beams of the sun, exhibited a most enchanting contrast.

In the evening of the 8th of August, the sound of a drum was heard. This Captain Stedman believed to proceed from the rebels, and he kept his men attentively on guard, to prevent the possibility of a surprise. He had written to Colonel Fourgeoud, to inform him of his forlorn and almost hopeless situation; and, on the ensuing day, he received from that officer a letter,

which conveyed to him the mortifying intelligence that no relief could be afforded him. The letter was accompanied only by a few fish-hooks and some fishing tackle; but a friend of Captain Stedman sent him, from Paramaribo, an acceptable present of tamarinds, oranges, lemons, and Madeira wine. These he distributed among his drooping soldiers, and thereby afforded them some relief.

At length the Captain was himself attacked by a fever, and was in a truly deplorable condition. He had been deprived, by sickness, of his only two officers: his men had been reduced in number to about fifteen; he had no surgeon nor refreshments; was surrounded by a black forest, and was exposed to the attack of a merciless and relentless enemy. In the midst of his distress, however, he received an order to conduct the barges down the river to *Devil's Harwar*, and there to station himself on shore. Consequently, on the 26th of August, he bade farewell to the place where he and his companions had experienced so much misery.

As the Charon was floating down the river, the sentinel called out that he saw something, which, by its size, he imagined to be a rebel, moving among the underwood, near the bank of the river. The captain immediately landed his men, convinced that it must have been either a spy, or some straggler detached from the enemy. One of the slaves, however, declared that it was no negro, but a large snake. He pointed it out, and begged of the captain to shoot it. This, after two ineffectual attempts, accompanied with much difficulty, he did. A rope was then put round the animal's neck, and he was dragged to the boat. But this was not an easy operation, for the creature, which was more than twenty-two feet in length, and thicker than the body of a boy twelve years old, though mortally wounded, still continued to writhe and twist about, in such a manner as rendered it dangerous for any person to approach him. When he was in the water, fastened to the boat, he was still

alive, and kept swimming like an eel. In the skinning of this animal, it was requisite to draw him up by a rope to the branch of a tree. One of the negroes having ascended by the trunk, left the tree, and clung fast upon the monster, which was still twisting; and he performed the operation by stripping off the skin as he descended by the serpent's body to the ground. They obtained from the animal several gallons of oil; and the negroes were desirous of cutting the body into slices, to feast upon it, but this the captain would not permit.

On the 27th of August he took the command of Devil's Harwar, after having been on board the Charon fifty-six days, in the most wretched condition that can be imagined. All the men who had accompanied him from Paramaribo were either dead or sick, except one serjeant, two corporals, and fifteen privates. At length, however, he was reinforced, and obtained from Paramaribo a supply of ammunition, provisions, and medicines. At the same time he received an order to ascertain, if possible, the haunts of the rebels.

Accordingly, on the 6th of September, when somewhat recovered from his illness, he proceeded through the woods. Here the track was so narrow, that the men could not march in two ranks, but each man, after the first, was obliged to follow his leader. The ammunition and provisions were carried by negroes. Footsteps of the rebels were soon discovered in the mud, but not a single rebel could be found. The fatigue of this march was almost indescribable. In some places the party had to wade through water and mire above their hips; and in others to climb over, or creep under, fallen trees. Their flesh was lacerated by thorns; and they were sadly stung by ants, wild bees, and other insects. But the worst of their sufferings were occasioned by marching in a burning sun during the day; and, for the last two hours at night, in total darkness, holding each other by the hand.

On the 9th Captain Stedman returned to Devil's

Harwar, where, being superseded in the command by another officer, he obtained permission to return to *Paramaribo* for the recovery of his health. He arrived there on the 14th, and, under the superintendance of a skilful physician, and the care of his wife, he gradually recovered.

One day, while he was at Paramaribo, he was walking along the water-side, when his attention was excited by a group of human beings, about sixty in number, just landed from a Guinea ship. They were a drove of newly imported negroes, men and women, with a few children, who were about to be sold for slaves. The whole party were excessively thin and emaciated. Captain Stedman says, he could give no better description of them than by comparing them to living skeletons, covered with tanned leather. Before them walked a sailor, and behind them another, who carried in his hand a cane. Instead, however, of woe-worn and dejected countenances, as might have been expected, they seemed cheerful and animated; and not a single downcast look was to be perceived among them.

Captain Stedman says that it was customary, as soon as a Guinea-ship arrived in Surinam, to lead all the slaves upon the deck. Here they were refreshed with pure air, plantains, oranges, &c. and were properly cleaned and washed. After this some of them shaved each other's hair, in different figures, such as stars, half-moons, &c. an operation which was generally performed with a piece of broken bottle, and without soap. Part of them were then sent on shore to be disposed of; while the others passed the day in dancing, hallooing, and clapping their hands. At the sale of the negroes, before the bargain was concluded, they were, one after another, compelled to mount on a hogshead or table. Here they were examined by a surgeon, who obliged them to make various gestures with their arms and legs, to prove their soundness or unsoundness. Good negroes were, at this time, generally valued at the rate of from fifty to a hundred pounds each. Such as were

sold were immediately branded on the breast, or on the thick part of the shoulder, with a stamp, about the size of a sixpence made of silver, and having the initials of the new master's name. This barbarous ceremony being over, new names were given to them. They were then delivered to old slaves of the same sex, and sent to the estate, where each was properly kept clean by his guardian, instructed in labour and well fed. During the first six weeks they were not employed in working. The consequence of this was that they soon became plump and fat.

With regard to the treatment of slaves in Surinam, Captain Stedman says, that, by some masters, they were as well and as kindly treated as the most favoured servants are in England, but that from others they often experienced the most horrid tortures. To many of these tortures he was himself witness, and he records several instances, which it is painful to read.

Under a mild master and an honest overseer, however, he says that a negro's labour is no more than healthy exercise, which ends with the setting sun. The remaining time is his own, and he employs it in hunting, fishing, cultivating his garden, or making fishing-nets for sale. With the money he thus obtains he buys a hog or two, sometimes fowls or ducks, all of which he fattens on the spontaneous productions of the soil, without expense and with little trouble. Thus circumstanced, he is exempt from all anxiety respecting his subsistence; he pays no taxes, and looks up to his master as the protector of himself and his family. Every Saturday evening the slaves, who are well treated, close the week with dancing and singing, and generally once a quarter they are treated with a grand ball, to which the neighbouring slaves are invited. At these balls they are, in general, remarkably neat; the women appearing in their best chintz petticoats, and many of the men in fine Holland trowsers. It not unfrequently happens that entertainments of this description con-

tinue from six o'clock on Saturday night till the sun has made its appearance on Monday morning; the whole of which time is passed in dancing, cheering, hallooing, and clapping of hands. The negroes always dance in couples, the men figuring and footing, while the women turn round like a top, their petticoats expanding like an umbrella. Captain Stedman says, that it is astonishing with what ardour these dancing societies are kept up: he states, that he had known a newly imported negro, unable to procure a partner, figure and foot it, for nearly two hours, to his own shadow against the wall.

Fifth Day's Instruction.

GUIANA CONTINUED.

Conclusion of CAPTAIN STEDMAN'S *Narrative of an Expedition in Surinam.*

As soon as Captain Stedman was sufficiently recovered from his illness, he proceeded to his former quarters, for the purpose of joining Colonel Fourgeoud, who had gone up the *Cottica;* and he once more arrived at *Devil's Harwar* on the 30th of October. He thence went up the river to Wana Creek; and, four days afterwards, the colonel reached that place. Not long subsequently to this they marched together with the main body of troops, in search of the rebels; and, in their progress, they discovered and destroyed three villages. In this excursion they found seven human skulls, fixed upon stakes, and the mouldering bodies to which they had belonged lying beneath them. These proved to be the remains of Lieutenant Lepper, and six of his unhappy men, who had been stripped naked by the rebel negroes, and flogged to death.

On the 9th of November Colonel Fourgeoud issued orders that the troops should march in two columns, to scour the northern bank of *Cormoetibo Creek*. In this march, each officer, being provided with a pocket compass, they had to steer, like mariners, through an immense tract of wood, where nothing was to be seen but trees and sky. For the purpose of the columns giving directions to each other, they were ordered to cut certain marks on the trees as they passed; and, if they marched over deserts, heaths, or savannas, they were occasionally to drop bundles of small twigs or reeds, tied together in the form of a cross. At night they were obliged to encamp without huts or covering of any description, and to sleep in hammocks slung between the trees. Owing to some unaccountable neglect, their provisions were soon exhausted, and both officers and men were reduced to only one rusk biscuit each for twenty-four hours. These biscuits were formed of coarse rye loaves cut in two, and baked as hard as a stone. On the second day they experienced a trifling relief, in the acquisition of a large bird, a kind of wild turkey, which was killed by one of the men, and made into broth. Though the dry season had recommenced, they were still deluged with rain, and now had no means whatever of shelter from it. They could have shot many birds among the trees, but, lest the report of their muskets should apprize the rebels of their presence, the men were not permitted to fire, on pain of death. The rains were so heavy that, in several parts of the woods, they had to wade through the water knee deep. The troops soon became sickly, and the innumerable hardships to which they were subjected in their march, reduced them to the most deplorable condition that can be imagined. When they arrived at a place called the *Jerusalem*, near the mouth of Cormoetibo Creek, they were utterly exhausted by famine and fatigue. Their bodies had been stung by various kinds of insects, and dreadfully lacerated by thorns. Several of them, unable to walk, had been carried by the slaves in ham-

mocks slung upon poles. During their march they had not seen a single enemy.

Captain Stedman, speaking of this search for the rebels, remarks that it is amazing to observe with what great skill one negro can discover the haunts of another. While an European is unable to discern the slightest vestige of a man's foot in the forest, the roving eye of the negro-ranger discerns the broken sprig, and the faded leaf trodden flat, without ever missing it.

The whole number of Europeans and Negroes, who were engaged in this expedition, was near five hundred, but half of them were sick and confined to their hammocks. At Jerusalem Colonel Fourgeoud left Captain Stedman with the command of four hundred men, whilst he, with twenty European soldiers and twenty negro rangers, went to reconnoitre a demolished rebel village at some distance. In the return of this party they took three rebel negroes: of these one escaped, but the other two were secured.

On the 30th of November, the troops broke up, and once more returned to *Wana Creek*. While stationed at this place Captain Stedman speaks of being annoyed, during the nights, by the loud and hoarse croaking of a species of toad called Pipa. These animals are as large as ducks, and, in appearance, are extremely hideous. They are covered with a dark brown, rough, and scrofulous skin, and are remarkable for the females carrying their tadpoles, or young ones, each in a small cell or hole, upon their back. The croaking of these toads, and the hammering kind of noise produced by another species, and incessantly continued from sun-set to sun-rise, the howling of baboons; the hissing of snakes, the growling of tigers, and the heavy rains which frequently fell, rendered the nights gloomy and uncomfortable.

After having undergone innumerable hardships for many weeks, Captain Stedman was informed by the colonel, that he was at liberty, if he pleased, to return to Paramaribo, to recruit and refit himself. This pro-

posal he gladly accepted; and he and some other officers departed, leaving behind them, he says, "a band of such scare-crows, as would have disgraced the garden or field of any farmer in England."

Captain Stedman continued in Paramaribo, from the 15th of January, 1774, till about the middle of February, when he received orders to proceed to a place called the *Hope Estate*, and there, in the absence of Colonel Fourgeoud, to take the command of the river *Comewina*. Having purchased a complete camp equipage, and furnished himself with an ample store of provisions, he embarked on board a tent-boat, rowed by six negroes, and shortly afterwards repaired thither.

On the 19th, about noon, he reached the Hope, and found the Comewina a more beautiful river than the Cottica. Both these streams are bordered with coffee and sugar plantations; and, about half way up each, there is a protestant church, where the people of the plantations resort, to hear divine worship. The estate, called *L'Espérance*, or *The Hope*, at which Captain Stedman now took the command, was a valuable sugar plantation, situated on the left side of the Comewina, and at the mouth of a rivulet called *Battle Creek*. Here the troops were lodged in temporary sheds or wooden houses; but on a spot so low and marshy as, at spring-tides, to be entirely under water. In another station higher up the river, the troops were more disagreeably quartered than at the Hope. This was owing chiefly to an amazing number of rats with which the place was infested. These destroyed the men's clothes and provisions, and ran over their faces by dozens, as they lay in their hammocks.

The situation of the Hope was unhealthy, and the hospital was so crowded with sick as to present a melancholy spectacle; yet Captain Stedman felt himself here much more independently and more comfortably circumstanced than he had been in any of the previous excursions. He was extremely respected by the neighbouring planters, who plentifully supplied him with presents,

of game, fish, fruit, and vegetables. The woods afforded him much amusement. In these he killed several kinds of birds, some of which he had never seen before: he also saw two species of deer; one about the size of the English roebuck, and the other much smaller. On the whole, he was here so happy and so much respected, that he could almost have engaged never more to have changed his situation.

It is to be remarked that Joanna, though still a slave, was permitted to reside with him. The history of this interesting and amiable female, and of Captain Stedman's endeavours to rescue her from slavery, is dwelt upon in his narrative at considerable length; but it is requisite to omit it in this abstract, as wholly foreign to the object at present in view.

The Hope estate consisted chiefly of an extensive sugar plantation. Captain Stedman consequently had now an opportunity of observing the whole process adopted for the manufacture of sugar. He says, that the buildings usually consist of a dwelling-house for the planter, outhouses for the overseer and book keeper, a carpenter's lodge, kitchens, storehouses, and stables. The expense of a sugar-mill is usually from four to seven or eight thousand pounds. It consists chiefly of three immense cylinders or rollers of cast-iron, supported underneath by a strong beam; and so close together, that, when in motion, they squeeze as thin as paper whatever comes between them. Most of these mills are put in motion by a large horizontal wheel, which is drawn round by horses or mules. Adjoining to the mill-house is a large apartment, that contains the coppers or large caldrons, in which the liquid sugar, after it has been squeezed out of the canes, is boiled. Opposite to these are large flat-bottomed vessels, into which the sugar is put to cool and crystallize. After this it is packed in hogsheads for exportation. Adjoining to this apartment is the distillery, where the dross or scum of the boiling sugar is converted into a pernicious kind of rum, called "kill-devil," which is

much drunk in this colony, and is the only kind of spirit allowed to the negroes.

Each of the estates in this colony contains five or six hundred acres; and the parts appropriated to cultivation, are divided into squares, where pieces of cane, about a foot long, are stuck into the ground, in an oblique position, and in parallel rows. The shoots, or canes, that spring from them are twelve or sixteen months arriving at maturity. They then become yellow, of the thickness of a German flute, and from six to ten feet in height: they are jointed, are furnished with pale green leaves, and have a very beautiful appearance.

Some of the estates have more than 400 slaves each; and the expense of purchasing these, and of erecting the buildings, frequently amounts to twenty or five and twenty thousand pounds sterling, exclusive of the value of the ground.

During the time that Captain Stedman was at the Hope, he was so amply supplied with provisions of almost every description, that he was able to send a large boat load of them to Colonel Fourgeoud, who was encamped, with a considerable body of troops, at a post near the source of the Comewina, called *Magdenberg*.

On the 20th of April Colonel Fourgeoud moved, with all his men, from this place, to a lower part of the river, where such of his men as were sick could be taken better care of. Hitherto his excursions against the negroes had been wholly unsuccessful, and his troops, by the hardships they had undergone, had been reduced to a most deplorable state. On the 29th he was rowed down to Paramaribo, accompanied by a few of his officers. They went thither to refresh and recruit themselves, and indeed they had great need of refreshment, for they were all extremely weak and emaciated. The troops that were left behind were reduced to a small number, and, though in a state totally unfit for service, were directed to take the

management of an armed barge, and to row it up and down the river. Captain Stedman was directed as before, to protect the adjacent plantations, and to attack the rebels if he could discover them, and if it was probable he could attack them with success. During the absence of the colonel, the rebels began to plunder two of the estates, but were beaten back by the plantation slaves. On another occasion, three or four of them were killed, and a few more were taken prisoners.

Fourgeoud returned on the 9th of May. During his absence Captain Stedman, in consequence of a blunder of one of the surgeons, who had given him an improper medicine, had suffered a dreadful illness; and he was not yet recovered. Notwithstanding this, the colonel intimated that his services would be immediately required, as he was now resolved to push on the war with redoubled energy. The surgeons, however, declared that the captain was wholly incapable of service; and on the 29th he experienced so severe a relapse, that it became necessary to appoint another officer to take the command of the river. He was desirous of returning to Paramaribo, but this the colonel would not allow, and he was compelled to remain at his station. His only amusements now were to make drawings of such natural objects as the vicinity of the place supplied, and to walk out with his gun, whenever his strength would permit him to do so.

In the mean time the colonel, with about a hundred troops, marched into the forest, in search of the enemy. He discovered and destroyed some of their fields, but further than this his progress was attended with little success. The frequent miscarriages that had been experienced in the course of this campaign, fully evinced how difficult it was for European troops to carry on a war in the forests of South America.

The operations were continued, with various interruptions, for many successive months. At length, on the 18th of January, 1774, Captain Stedman bade a

last farewell to the Hope, and returned to Paramaribo. He rowed down the river at the ebb of the tide, by which an opportunity was afforded him of seeing the mangrove trees that line the banks. The branches of the mangroves, from the waters edge to high-water mark, were stuck full of oysters. These attaching themselves to trees, as others do to rocks, has given rise to a vulgar error, that they grow or vegetate like fruit.

To detail the proceedings of the troops in all their operations against the rebels, would be extremely tedious and uninteresting. During the whole year, 1774, nothing was effected. In the beginning of 1775, Colonel Fourgeoud obtained reinforcements from Holland. With these he entered the woods, but still was unable to bring his opponents to a pitched battle. By his constantly traversing the upper parts of the rivers, however, and scouring the skirts of the colony, he prevented many depredations on the estates; but this, though an essential service to the inhabitants, was not effected without a dreadful expence both of blood and treasure.

On the 14th of June, intelligence was brought that some rebel huts had been discovered near the sea-side; and that a party of troops had been attacked by the negroes, and beaten back with great loss. Orders were consequently issued for all the troops, that were able to march, to hold themselves in readiness. The commander, however, for reasons best known to himself, delayed his movements for more than two months. On the 3d of July, he proceeded towards *Barbaceeba*, on the river *Cottica*, a place which he appointed for the general rendezvous, previously to a grand attack on the rebels. Before he left this place, Captain Stedman joined him. The troops, in general, were in high spirits, and eager for service; some in hopes of plunder, some from motives of revenge, and some from a wish to see a termination of the war. Others, however, were worn down with continued illness and hard

service, in a tropical climate, on a morassy soil, under a scorching sun, and environed by an unbounded forest.

The rebels, being apprized by their spies, that Fourgeoud was at Barbacoeba, set fire to all the huts which had been left standing by his patroles, and, on the 15th of August, continued shouting and hallooing through the whole night. This so much enraged the commander, that an hour before day-break he entered the woods in pursuit of them. The number of his men fit for service was exactly 200 Europeans. They proceeded in a course due east; and, after having marched about eight miles (a great distance in this country, where pioneers with bill-hooks must open all the path), they erected huts and encamped. On the ensuing day they continued their march, but to a less distance, and at night they were ordered to sling their hammocks among the trees, and to sleep without any covering. This was done to prevent the enemy from hearing the sound of cutting the trees. No fires were lighted, not a word was suffered to be spoken, and a strict watch was kept round the camp. The adjacent ground was marshy, and the musquitoes were more numerous and troublesome than Captain Stedman had found them even on board the fatal barges in the river Cottica. Some of the men were so much annoyed by them, that they dug holes with their bayonets in the earth: into these they thrust their heads, stopping the entry, and covering their necks with their hammocks, whilst they slept with their stomachs on the ground. To free himself from these troublesome insects, Captain Stedman, by the advice of a negro slave, ascended, with his hammock, to the top of the highest tree he could find. There, at the height of a hundred feet above the ground, he slept in quiet, unable to see his companions for the myriads of musquitoes below him. Besides musquitoes, the men were annoyed by the stings of an immense army of small ants.

The march was continued the ensuing day; and about midnight Captain Stedman was roused from a profound sleep, by a heavy shower of rain, and by the hallooing

and shouting of the rebel negroes, who discharged several musquets. The shot, however, did not reach the camp. This disturbance continued till day-break. As soon as it was light the colonel, though now himself excessively weak from a violent attack of ague, hastened in pursuit of the foe, but to no purpose; for, about one o'clock his troops got into a bog, from which they had the utmost difficulty to extricate themselves. At length they were obliged to return to the place of their previous night's encampment, with the loss of two of their men, who were supposed to have perished in the marsh.

Among what Captain Stedman denominates the plagues that were attendant on this march, he enumerates about eighteen different kinds of insects, and twelve species of disease by which the men suffered. Such, he says, were the pests with which they had to struggle in this baneful climate, that the poor men died in multitudes, without medical assistance, and frequently without a friend to close their eyes, or a coffin or shell to receive their bodies; and at last, like heaps of loathsome carrion, they were thrown promiscuously into one pit.

After this the colonel was joined by a corps of a hundred negro rangers, a most important reinforcement in their present juncture, particularly as these black soldiers knew how to engage with the rebels much better than the Europeans did. The colonel, on the 17th, issued orders for his little army to march in three lines or columns. They proceeded till about noon, when they came to a swamp, which they crossed. These swamps, or quagmires, are very common in Surinam, and very dangerous: they are a soft miry kind of bog, covered with a thin crust of verdure, sufficient, in many places, to bear the weight of a man when walked over. But should this crust give way, whoever breaks it is swallowed up in the chasm, where he must inevitably perish, if not immediately extricated. Several of the men, this day, sunk through the surface of the swamp, as if ice had

broken under their feet; some of them up to the arm-pits, and they were not got out again without difficulty.

This day they approached within a few miles of the enemy's strong hold, but the men were excessively fatigued. On the ensuing morning they advanced, and, about eight o'clock, they entered an extensive and formidable swamp, which defended the rebel settlements, and in which they soon found themselves above their middle in water. After having waded about half a mile, the grenadiers mounted the beach on the opposite side: the main body followed, and the whole formed without the slightest opposition. On the spot where they now stood, a spectacle was presented to their view, sufficient to shock the most intrepid among them. The ground was strewed with skulls and bones, still covered with flesh, and besmeared with the blood of some unfortunate men, who, a little while before, had been defeated by the rebels.

The troops now followed a kind of footpath that had been made by the enemy; and not long afterwards they met a party of the rebels, each carrying a green hamper upon his back. They fired, dropped their bundles, and run back towards their village. In the hampers, which were formed of leaves curiously plaited, these negroes had been carrying rice from one part of their settlement to another. Advancing still further, the troops came to a field of rice and Indian corn, belonging to the rebels. Here they halted till the whole force came up. They then immediately proceeded, cutting their way through a small defile of the wood, and under a heavy fire of musquetry from the enemy on every side. At length they approached within view of the rebel town, situated amidst rice-fields, sheltered from the sun by the foliage of a few lofty trees, and presenting altogether a prospect romantic and enchanting beyond conception. Here a general attack was commenced, and a firing, like one continued peal of thunder, was kept up betwixt the rebels and

the troops for more than forty minutes. The approach to the town had been rendered extremely difficult by the trunks and roots of trees, which the enemy had placed in the way; and behind which, as temporary fortifications, they fired upon the troops, with deliberate aim. The troops, however, scrambled over these impediments, and fought their way with the most undaunted courage. They had approached the town, and were about to enter it, when a rebel captain, wearing a tarnished gold-laced hat, and bearing in his hand a torch of flaming straw, seeing that the ruin of the place was inevitable, set fire to it in the very presence of the invaders: and so dry were the houses that they were all instantly in a blaze. This bold and masterly manœuvre afforded the enemy an opportunity of retreating with their wives and children, and carrying off all their most valuable effects; whilst the pursuit of the troops, and their expectations of plunder, were at once frustrated by the ascending flames and the unfathomable marsh, which they soon discovered on all sides to surround them.

Captain Stedman says, that within the last hour, the continued noise of the firing, shouting, swearing, and hallooing of black and white men mixed together; the groans of the wounded and the dying; the shrill sound of the negro horns from every quarter, and the crackling of the burning village; the horrid appearance of the wounded men weltering in blood and dust: the ascending flames; and the clouds of smoke with which they were surrounded, formed on the whole a scene which it would be impossible to describe.

Here the troops halted a little while to rest and refresh themselves. After they had done this, they inspected the smoking ruins. They found the town to have consisted of about a hundred houses or huts, some of which were two stories high. Among the glowing ashes they picked up several trifles that had escaped the flames, such as silver spoons and forks, which had been pillaged from different estates. They

also found some knives, broken china, and earthen pots. Among other things, they observed three skulls fixed upon stakes, the mournful relics of some Europeans who, not long before, had fallen into the hands of the rebels. The colonel ordered the bodies of all the men who had been slain to be buried; and these bones were thrown with them into one pit. After this mournful ceremony was concluded, the troops proceeded to sling their hammocks for the night, under the beautiful and lofty trees, with which the town was surrounded. While this was doing, Captain Stedman was shocked to find the negro rangers employed in a most savage and barbarous amusement. They were playing at bowls with the heads of their slaughtered enemies. It was in vain to reprimand them for this inhuman diversion: it was the custom of the country, and they could not be restrained. Their subsequent treatment of these heads is too horrid to be described: finally, they took out the jaw-bones, and smoke-dried them, together with the right-hands of the slain, to be carried home, to their wives and relations, as trophies of their victory.

In the course of the ensuing night the rebels more than once annoyed the troops by firing upon them. They even came so near as to enter into conversation; and they and the rangers insulted each other by a kind of war-whoop, by singing victorious songs, and sounding their horns, as signals of defiance. After a long and abusive contest, the rebels tinkled their hatchets, fired a volley, gave three cheers, and dispersed before the rising of the sun.

The rebel negroes are distinguished from others, by having their hair plaited close to their head. Their dress consists only of a cotton sheet, tied across the shoulders: this protects them from the weather, and also serves them to rest upon. They carry a pouch formed of the skin of some animal; have a few cotton strings round their ankles and wrists for ornament; and a superstitious "obia," or amulet round their neck,

and their weapons consist chiefly of a firelock and a hatchet.

The rebels of this settlement having been apparently subdued and dispersed, Colonel Fourgeoud gave directions that the crops of all their rice fields should be destroyed. This was done; and afterwards fifty marines and thirty rangers were sent to reconnoitre behind the town, and to discover, if possible, how the rebels could pass to and fro, through an unfathomable marsh, whilst the regular troops were unable to pursue them. The officer who commanded on this expedition, perceived, after a considerable search, a kind of floating bridge among the reeds, but so constructed that only one man abreast could pass it. On this bridge a few rebels were seated astride to defend the communication. They fired upon the party, but were soon repulsed.

On the 22d Colonel Fourgeoud ordered a detachment to cross the bridge, in pursuit of the rebels who had escaped. Captain Stedman had the command of this detachment. The party scrambled over the defile of floating trees, and soon afterwards found themselves in a large oblong field of cassava and yams, and containing about thirty houses, all now deserted. Here, to their astonishment, they discovered that the reason of the rebels approaching the troops shouting, singing, and firing a few nights before, was merely to cover the retreat of their friends. While this was going on, the troops were prevented, by the noise, from discovering that men, women, and children, were all actively employed in preparing hampers of rice, yams, and cassava, for subsistence during their escape. The project had been completely successful; and a more masterly trait of generalship has seldom been exhibited, even by the most enlightened nations.

Colonel Fourgeoud was excessively enraged at finding that he had thus been outwitted by negroes; and, though nearly destitute both of ammunition and provisions, he resolved to pursue them with unrelenting

fury. His scheme, however, was completely frustrated, and he most unexpectedly found, that himself and all his men were in danger of total destruction. The rebels had attacked and destroyed several of the rangers who had been detached on different services; and, at length, they had surrounded their assailants, most of whom were either sick or wounded, and nearly destitute both of ammunition and provisions. Instead of proceeding he was compelled to retreat; and, in the afternoon of the ensuing day, he returned to *Barbacoeba*, the place of general rendezvous; but in a most wretched condition. The whole detachment was nearly worn out by fatigue: some of the men were in a state of starvation, and others mortally wounded. All the slaves were employed in carrying the sick and lame in hammocks slung on long poles, though these poor creatures were scarcely able to support themselves.

Here the troops were again safe, and a very important service had certainly been rendered to the colony, by the destruction of this nest of enemies. It is well known, that when the rebels are once driven away from any capital settlement, they never think of returning to live near the same spot. And so it happened in the present instance. From this period their depredations became much less frequent than before; and they soon afterwards retired into the interior of the forest, whence they were unable to commit much injury, and where they could not easily be joined by negro deserters.

Most of the remaining particulars related by Captain Stedman, of the proceedings against the rebels, are very uninteresting. The following occurrences, however, are deserving of notice. On one occasion, during their march, they were surprised to see an immense number of ants, of black colour, and each nearly an inch in length. These ants, Captain Stedman says, are so numerous and so powerful, that they will in a short time pillage a tree of all its leaves, which they cut in pieces, each about the size of a sixpence,

and carry under ground. It was very entertaining, he says, to see a whole army of them running in the same direction, each with a piece of green leaf, held in a perpendicular direction, in its mouth; and intended for use either in the formation of its nest, or for the nourishment of its young ones.

On the 21st of September, Captain Stedman was sleeping in his hammock, at a station near the river Cottica, when, about four o'clock in the morning, he was suddenly awaked, and was excessively alarmed to find himself weltering in blood, and yet without feeling any pain. He instantly started up, and, with a fire-brand in one hand, and all over besmeared with gore, ran to the surgeon. The mystery was soon explained. He had been bitten by a bat of immense size, and of the species called, vampyre or spectre bat. These singular animals suck the blood from men and cattle whilst they sleep, and sometimes even till they die. The manner in which they proceed is said to be very wonderful. Knowing, by instinct, says Captain Stedman, that the persons they are about to attack are in a sound slumber, they generally alight near the feet. Here they commence their operation by a fanning motion with their wings: they then bite a piece out of the tip of the great toe, so small that the head of a pin can scarcely be inserted into the wound. Through this orifice they suck the blood until they are obliged to disgorge. They then begin again; and thus continue sucking and disgorging till they are scarcely able to fly. Cattle are generally bitten in the ear, but always in places where the blood flows spontaneously. Captain Stedman, by the recommendation of the surgeon, applied some tobacco ashes to his wound. Afterwards, on examining the ground, he observed several small heaps of congealed blood round the place over which he had slept; and from these it appeared, that he had lost at least twelve or fourteen ounces of blood. Not long afterwards he killed a vampyre bat, and found it to measure thirty-two inches

and a half from the tip of one wing to that of the other; and some of these animals are said to measure more than three feet in extent.

On the 16th of October, Colonel Fourgeoud entered another rebel settlement. This had been deserted, but the attention of the troops was excited by a house that had been erected for one of the chiefs. It was elevated considerably above the ground, that the owner might the better observe all around him, and had two doors, that he might more easily escape, in case of surprise. Near the house were some baths, in which his women had been accustomed to wash themselves every morning and evening, for there was no river in the vicinity of this settlement.

In their march, on the following day, the troops passed some ant-hillocks, that were upwards of six feet in height, and, without exaggeration, more than a hundred feet in circumference. Some time after this, among other plagues, the whole place of encampment swarmed with locusts, which appeared in most formidable troops, and devoured all the vegetable productions around. These insects were of a brown colour, two inches in length, and shaped like grasshoppers. They did not fly, but crawled by thousands on the very tables and seats, as the men sate at dinner; and at night they tormented them, by crawling in scores over their faces.

Colonel Fourgeoud, and most of his remaining troops, returned to Paramaribo before the end of the year. Here they were joined by Captain Stedman on the 3d of January following. Some further operations against the rebels were undertaken; the account of which it would here be uninteresting to recite; and at length, after seven campaigns, the troops were ordered to be finally withdrawn from the colony. In consequence of this order, Captain Stedman, with such of the troops as then remained, embarked for Europe, on the 29th of March, 1777.

So destructive had the climate, and exposure to the

unwholesome atmosphere of woods and marshes of this country been to the Europeans employed there, that, of nearly twelve hundred able-bodied men, who had sailed from Europe, not one hundred were restored to their country, and their friends.

Sixth Day's Instruction.

GUIANA CONTINUED.

Berbice, Demerara, Essequebo, Spanish Guiana.

THE small colony of *Berbice* is situated west of *Surinam*, and is bounded on the east by the river *Corantine*, and on the west by the *Demerara*. Its extent, towards the blue mountains in the interior, has not been ascertained. The foundations of this colony were laid by the Dutch in the beginning of the seventeenth century. About the year 1626, a merchant of Flushing, whose name was Van Peere, sent some ships to this part of South America. These carried out Europeans, who formed a settlement on the shore, for the purpose of trading with the Indians, and collecting produce. The cultivation of the land was subsequently attempted, and with considerable success. With some interruptions, it continued in the hands of the Dutch till the year 1803, when, with Surinam, Demerara, and Essequebo, it was surrendered to the English, by whom it has since been retained.

The river *Berbice*, from which the colony has its name, is about a mile and half broad at its mouth; and, nearly in the middle of the entrance, there is an island, called *Crab Island*. A bar or bank of sand, which extends from east to west across the mouth of the river, prevents vessels of heavy burthen from entering, and renders the navigation dangerous. On this

account few ships rendezvous here, but make the port of Demerara their anchorage, whence their lading is shipped in smaller vessels, to be conveyed to Berbice. A similar procedure is adopted in exporting the produce of the colony. The river is wide but shallow, and is navigable for small craft to the distance of about two hundred miles from the sea. On its banks nearly a hundred plantations have been formed. These are chiefly cultivated for the produce of sugar; but they also supply coffee, cotton, chocolate, and other articles.

Berbice is estimated to contain about forty thousand inhabitants, of which only two thousand five hundred are whites, one thousand are free people of colour, and the remainder are negroes. Its government is separate from that of Essequebo and Demerara; but, with some exceptions as to general rules, its laws are the same.

The capital of the colony is called *New Amsterdam*. This town is situated on the eastern bank of the river, and near the place where the Caije river falls into it. In laying it out the Dutch paid every attention to convenience. Each allotment appears to be an island, having ditches or trenches round the houses. These are filled and emptied every tide, by which means all the filth and dirt of the place are every day carried away. Each lot consists of a quarter of an acre of land, which not only allows space for the free circulation of air, but also for every house to have a kitchen garden. The houses are generally of wood, and seldom more than a story and half high. They are very long and narrow, with galleries on each side, for the inhabitants to walk and smoke in. Most of them are covered with a thatch formed of the large leaves of palm trees. The government house, and the buildings attached to it, are constructed of brick, and in the European stile. In the year 1798, there were two taverns in this town; and, at one of them was a table d'hote, or public dinner, every day, for the convenience of travellers, and of planters coming from the country.

Besides the Berbice, the river *Canje* is navigable, by the vessels of the colony, for about thirty miles. It falls into the Berbice on its eastern side, and opposite to Crab Island. On its banks are several fine estates, cultivated with sugar, coffee, and plantains.

Proceeding from the Berbice, towards Demerara, we pass three small rivers. On the banks of one of these, called the *Mahaica*, many of the wealthy inhabitants of the colony have erected villas, to which they retire whenever the yellow fever, or any other contagious disease is prevalent in the capital.

Demerara.

From Berbice, if we proceed still in a westerly direction, we enter the colony of *Demerara*, or *Demerary*, as it is sometimes written. This colony, like those of which we have lately spoken, is indebted for its name to the river by which it is watered. It is, at present, in possession of the English, and is united in its government with Essequebo. Its extent of sea coast is nearly a hundred miles.

Narrative of a Voyage to the Demerara. By HENRY BOLINGBROKE, *Esq. Deputy Vendue Master at Surinam.*

THIS gentleman quitted England on a mercantile speculation, in the month of December, 1798, and a few weeks afterwards arrived off the coast of Demerara. The land, as he approached the shore, appeared to be very low, and was in many parts covered with trees, even to the water's edge. A delightful fragrance was carried along the breeze. On passing up the river, the plantations and other cultivated grounds, appeared very beautiful. Numerous clusters of cottages were seen, many detached buildings, and some houses, that were two, three, and even four stories high. These were

painted white, and had red boarded roofs. On each side of the river several windmills were seen at work.

The ship, in which Mr. Bolingbroke had sailed, was brought to an anchor off the town of *Stabroek*, on the eastern bank of the Demerara. The captain and the passengers landed; and no sooner had they entered the town than they were surrounded by a band of hucksters and pedlars. Among these were blacks, yellows, and tawnies, bawling on all sides, and in a wretched jargon, half Dutch and half English, to know if the captain had any thing to sell. Mr. Bolingbroke, not liking to be included within this stifling crowd, took an opportunity of slipping away from it, by passing between a stout mulatto woman and a tall negro butcher, leaving the captain earnestly engaged in assuring them all, that he had plenty of goods to dispose of.

As Mr. Bolingbroke was proceeding from this scene of confusion, he observed some fine oranges. Being desirous of purchasing a few, he asked for sixpennyworth, and the negress, who had them for sale, gave him thirty. Unable to carry these in his hands, he was obliged to put some into his handkerchief, and others into his pockets. This purchase immediately stamped him as a new comer. Several negroes, who were standing by, offered to carry the oranges for him. Others greeted him on his arrival, in the negro English dialect, "How d'ye massa? You come from Buchra country? No, Buchra country good!"

Stabroek, the chief town of the colony, was a place totally different from any that Mr. Bolingbroke had before seen. It stands on a flat beach, and canals inclose the main street; while wooden houses, with colonnaded porticoes and balconies, shaded by projecting roofs, are orderly arranged, between spacious intervals, in three parallel lines. These houses are seldom more than two stories high, stand on low brick foundations, and are roofed with red wood. None of them have glass casements, but Venetian blinds, or "jealousees," as they are here called, close every window. The

rooms project in all directions, for the purpose of admitting a free current of air, so that the ground-plan of a dwelling-house is mostly in the shape of a cross. There are no trees in the streets, as in Holland. Casks and bales of goods lie about, as if every road were a wharf; and numerous warehouses are intermingled with the dwellings. Even the public buildings are of wood. Negroes, clad only in blue pantaloons, or with merely a checked towel before them, and tied round their loins, are seen actively employed in every quarter. Here and there a white man in a muslin shirt, and gingham trowsers, is seen smoking his segar, and giving directions to his sable messengers from under his umbrella; or is led about in a phaeton drawn by ponies, to superintend the business that is going on. A noonday sultriness and silence prevail; and every motion is performed with the utmost tranquillity for fear of moving the dust.

The principal streets are straight. The middle street is paved with bricks, and has lamps on each side; and a navigable canal runs on each side of the town. This is filled and emptied by the tide, and affords to the houses, not situated on the river, every convenience for the loading and unloading of goods. There are no taverns nor lodging-houses in Stabroek: hence the merchants' houses have very often the appearance of inns. A person coming from England, generally brings with him letters of introduction: these secure to him a hospitable reception in the house of any merchant to whom they are addressed. A knife and fork is laid, and a hammock is prepared for him, which he may continue to occupy as long as it suits his convenience to do. Planters from the country always lodge in the house of the merchant with whom they transact business.

On his first landing Mr. Bolingbroke was surprised with the different shades of coloured people which he saw. These were *mestees*, or the offspring of a white parent and a mulatto; *mulattoes*, the offspring of a

white man and a negress; and *samboes*, the produce of a mulatto and a negress.

In Demerara the style of living differs very much from that in England. The general hour of rising is six o'clock, which is far the pleasantest time of the day. Coffee, or chocolate, is always ready at this hour; but breakfast is delayed till ten o'clock. At this meal animal food, wine and water, and sometimes fruit are introduced. By four in the afternoon all business is over for the day; and five o'clock is the dinner hour. A profusion of food is served up at this meal by negro attendants, who display great dexterity in waiting at table. Madeira and claret are the wines chiefly in request; and London porter and bottled beer are passed round betwixt the courses. The dessert; in some instances, consists of Bologna sausages and salad, anchovies and olives; besides several kinds of fruit, particularly pine-apples, guavas, oranges, shaddocks, and avoiras. There are no bells in the houses; and every gentleman carries in his pocket an ivory whistle, which he uses for the purpose of assembling the servants. The evening is frequently spent at the coffee-house. If spent at home, much of the time, even if cards be introduced, is passed in smoking. Draughts, backgammon, chess, whist, and billiards, are all favourite amusements here. Few weeks pass without a ball or concert, the attending of which is very expensive. A ball and supper cost to each gentleman eight dollars, and a concert and ball twelve dollars: but each ticket also admits two females.

Mr. Bolingbroke thus describes the habits of a Demerara planter. He generally begins to smoke from the time he rises in the morning; and he enjoys his pipe of tobacco and gin till between nine and ten o'clock. The baas, or overseer of the estate, then comes to him to receive his orders. After this the planter dresses himself, and calls for a glass of water and a napkin to wash his hands and face with: Mr. Bolingbroke says, that he scarcely ever saw a hand-bason in houses, even where there were

white females. In most of the houses the rooms are every morning scrubbed with lemons, which diffuse a grateful odour, and correct the fumes of the tobacco. About eleven o'clock the planter breakfasts on various kinds of animal food, highly seasoned soups, and fruit. As soon as this meal is ended he orders his horse, and pays a visit to some of his neighbours, or rides round his estate to see the negroes at work: in either case a negro boy follows him on foot, with a pouch of segars and a stick of fire; for it is the constant practice of the Dutchmen of this colony, whether on horseback, walking, or riding in a carriage, to smoke, and to be supplied by a servant. He dines between three and four o'clock, and in the afternoon retires to his hammock, where he sleeps away the fatigues he has undergone. Towards evening he rises and takes his coffee, after which he walks round the buildings, to inquire into the state of the negroes and their work. The general hour of retiring to rest in this country is eight or nine o'clock.

There is in Stabroek a market-place, where the negroes assemble to sell fruit, vegetables, fowls, eggs, beef, pork, fish, bread, and other articles; and where hucksters expose for sale articles of European manufacture, much in the same manner as pedlars do in England. These hucksters are free women of colour, who purchase their commodities of merchants at two or three months credit, and retail them for ready money. Several of them are wealthy, and possess ten, fifteen, or twenty negroes each, all of whom they employ in this kind of traffic. It is no uncommon thing for these negroes to travel about the country for several weeks successively, carrying with them trunks of goods of considerable value. They are supplied with a various assortment of articles: with coarse checks for the dresses of negroes, cambric for the shirts of the planters, and ornaments of divers kinds for females. Coloured women, of all descriptions, are extravagantly fond of dress; and those who reside in the country have great delight in the arrival of a huckster.

The market at Stabroek is abundantly supplied with

butcher's meat, but it is sold at a most extravagant rate; mutton at three shillings; veal at two shillings and sixpence; beef at two shillings and a penny; and pork at tenpence per pound. The labour of mechanics is extravagantly dear throughout the colony. A negro carpenter, or mason, can earn from five to ten shillings a day, according to his skill. House rent is also very high. Good houses may be let without difficulty, for three, four, and even five hundred pounds a year each.

The public buildings in Stabroek are in no respect remarkable. The governor's house comprises a range of offices for the management of public business. The secretary's office is so large as to contain the courts of police and justice, and a place of worship, in which every Sunday the Dutch service is first performed by an ecclesiastic of that country, and then the garrison chaplain reads the prayers appointed by the church of England.

The population of Stabroek, about the year 1800, was estimated to consist of about one thousand five hundred white persons, two thousand people of colour, and five thousand negroes. A weekly newspaper was, at this time, published here. To obviate the difficulty of obtaining small change, paper money for very small sums was in circulation both in Demerara and Essequibo. The lowest amount was for five pence sterling, and the highest for five shillings. The notes were marked with certain little figures, that the negroes, who were unable to read, might know the amount.

At a little distance from Stabroek is the *New Town*. This has four principal streets, and may be considered as the Cheapside of London in epitome. Here are merchants' stores; and the retail shops of goldsmiths, watchmakers, hatters, apothecaries, slopsellers, and segar makers. In short, every thing is here to be found which can be purchased in the colony. On each side of this town, which was built by the English, are canals, the banks of which, like so many wharfs, are filled with various kinds of English manufactured goods.

The house in which Mr. Bolingbroke resided at

Stabroek was spacious and airy, and had perforated shutters, to admit every where a free circulation of air. The household establishment consisted of eight male and two female negroes. All the beds were furnished with gauze curtains, to protect the persons sleeping in them from the stings of musquitoes.

With respect to the river of Demerara. It forms at its entrance an excellent harbour, and is there nearly two miles in width; but vessels of heavy burthen find a difficulty in passing the bar or bank of mud which runs across it. At the distance of ten miles above Stabroek it is about a mile and a half wide; and it is navigable more than a hundred miles from its mouth. Settlements have been formed on its banks nearly a hundred miles further, where there are cataracts, or rapids, which obstruct the navigation. A few miles beyond these rapids, two streams unite to form the Demerara, but their sources are unknown to Europeans. The land in cultivation along the banks of the river is confined to the productions of sugar, coffee, and plantains, with a small quantity of cocoa and rice. The scenery is pleasing, but uniform. Plantations regularly ranged on each side; dwelling-houses built on the banks close to the water; other buildings scattered about in different directions; wind, water, and cattle mills, on the sugar estates, with "logies," or barns; three stories high on the coffee estates, convey a favourable idea of the wealth and industry of the colony. Every plantation has a wharf, or landing-place, opposite to the dwelling-house, and a canal, or trench, with sluices, which answer two purposes, to drain off the superfluous water from the estates, and as a harbour for boats and other vessels, while they are loading or discharging their cargoes.

The plantations along the river, as well as in other parts of the colony, were originally laid out by the Dutch West India company, in allotments of five hundred acres each. These were of oblong form, containing one hundred roods in front, and seven hundred and fifty in depth. Each proprietor had a conditional grant of an

equal quantity of ground behind the first, when two-thirds of that should be cultivated. All the plantations became entitled to this additional allotment, and many of the proprietors have carried the cultivation of their lands to the distance of thirteen or fourteen hundred roods from the banks of the river. Each estate is surrounded by a canal, so as to be in itself an island; and has a bridge on each side, for the accommodation of travellers. Like public roads, these bridges are regularly kept in repair; and are painted white, that they may be the more easily seen in the night.

When Mr. Bolingbroke was in Demerara, three new canals had been formed from the river, to the distance of twenty miles into the interior of the country; and, as the facility of water carriage extended, fresh lands were progressively cultivated, in sugar, coffee, and plantains. This country is admirably adapted for the formation of canals, for not a mountain, nor a hill, is to be seen in it.

Shortly after his arrival in Demerara, Mr. Bolingbroke was invited to pass some days at a sugar estate, a few miles up the river. He went there, and was much pleased with his excursion. In every part of this estate, he says, there were navigable canals. These all fell into one grand stream that turned a water-mill; and on them the sugar-canes were brought in punts, or flat-bottomed boats, to the mills to be crushed. One day, as he was walking over the estate, he was astonished to see a great number of pine-apples, growing, apparently, wild, on the banks of the canals. He plucked one, but it did not prove good, and the owner of the estate pulled up four or five others, and threw them away like so many turnips, till he had procured one that was quite ripe. The astonishment of Mr. Bolingbroke was increased, when his friend conducted him to a trench, at least twelve feet wide, which was absolutely filled with pine-apples. This fruit had so completely overrun his property, that the owner had been obliged to root them up, in order to prevent their further extension.

From this estate Mr. Bolingbroke was conveyed in a boat about twenty miles further up the river. The tide, in setting upward, was so strong as to float the vessel against the current. The river gradually decreased in width; and the plantations here had not the neat appearance which was observable in those that he had seen in the lower parts of the stream. In particular places, the banks, to the water's edge, were covered with thick, and almost impenetrable, forests. Only the centre of the estates seemed cleared, so as to leave space for the circulation of air, or a view of the river from the dwelling-house. Mr. Bolingbroke here passed some sand hills, which appeared to be upwards of a hundred feet high, and were nearly perpendicular. On the ensuing morning he returned with the tide, and reached Stabroek about twelve o'clock.

The estates on this river bear a great resemblance to each other, both in extent and distribution; yet it is possible, in many instances, to distinguish the country of the owner by the appearance of his property. The general neatness and formal regularity of a Dutch estate, for instance, is often plainly discernible. The houses, buildings, bridges, and gates, are all painted white, the favourite colour of Dutchmen. Roads, regularly serpentine, lead to their dwellings: and, on different spots around, are little square clusters, or strait alleys of cocoa-nut trees and limes.

There are in Demerara two wet and two dry seasons in the year. The former commences in December and June, and lasts three months each time; and the dry seasons occupy the remainder of the year. During the latter, a clear and serene sky prevails throughout the day. At this season the twilight commences in the morning between four and five o'clock, and is gradual and long; whereas, in the evening, when the sun disappears, almost immediate darkness follows. This great difference, between the duration of morning and evening twilight, is occasioned by the sun rising over the sea, and setting

behind the mountains: the former casts no shadow, whereas the shadow of the latter has definite limits. The greatest heat is from seven till about ten o'clock, and it is then almost intolerable. The sea-breeze, after this, begins to set in: it restores to nature all her animation, and blows till dark. The days are from thirteen to fourteen hours long, and, throughout the year, there is no greater variation in their length than this. Though the days are hot, the mornings are generally very cold, and are attended by a heavy fall of dew; which, with the vapours arising from the swamps and stagnated waters, renders the interior of the country unhealthy to Europeans. The Indians, however, who inhabit these parts, enjoy good health, and are subject to few diseases. August is the commencement of the hurricane months in the West Indies; but Demerara is little affected, except by heavy squalls of wind. Hollow peals of thunder are often heard in the interior of the country, and, during this season, the day generally closes with faint lightning from the south and south-east.

The great article of cultivation here is sugar [the process of which has been already described in the account of Surinam] and the labour in all the plantations is performed by negro slaves imported from Africa. Mr. Bolingbroke is a decided advocate for a continuation of the slave trade, but with certain modifications in favour of the slaves. He asserts, that, in Demerara, the generality of slaves are well taken care of, have light and easy work, are not subject to any great severity of punishment, and are probably happier, because more secure from the severity of oppression, than in their native country.

Essequebo.

NINE miles west of the river Demerara is that of *Essequebo.* This river, at its mouth, is twenty-one miles broad; but the navigation of it, owing to numerous

banks of sand which run in different directions across, is very dangerous even for small vessels. At the mouth of the river there are three islands, which are valuable for their size, and for their high state of cultivation. Southward of these is a succession of other islands, which extend five-and-twenty, or thirty miles up the river.

The appearance of *Leguan*, the easternmost of the large islands, is very pleasing from the water. On the point facing the sea, there are eight windmills belonging to as many sugar estates. A sandy beach renders the landing good: the roads are finely shaded with orange and cocoa-nut trees; and the whole, being beautifully laid out, has the appearance of a gentleman's pleasure-ground. It is about six miles long, and three broad.

The earliest settlement on the banks of the Essequebo was made in the year 1698; but, owing to an erroneous idea, that the land adjacent to the sea was too low and swampy for cultivation, the colonists removed to higher grounds, nearly a hundred miles up the country, and where the soil was not so favourable as in many other parts. The land was granted to different speculators gratis, but with an express stipulation, that a certain proportion of it should be under cultivation in a given time. As a further inducement, a larger grant was promised in case the terms of the first were complied with. A governor was appointed, and a conditional code of laws was given by the Dutch West India company, subject to the approbation of the States General of Holland.

Coffee, cotton, cocoa, and indigo, were the articles first cultivated in Essequebo. Sugar was afterwards introduced, and the cultivation of cocoa and indigo was in a considerable degree abandoned. So great is the fertility of the soil, that, in some parts of the country, it has been known successively to produce thirty crops of what are called rattoon canes without being planted, whereas, in the West India islands, more than two are

never expected. Notwithstanding this the colony is not a very important one.

Both Essequebo and Demerara, as already stated, are at this time British possessions. They are distinct colonies, but are comprised under one government. Each has its court of justice and subordinate offices; but there is only one court of police, which is held in Demerara, at Stabroek.

Spanish Guiana.

THE part of Guiana which is now possessed by the Spaniards, extends along the sea-coast, about ninety miles, from *Cape Nassau* to the river *Oronoko;* and the Oronoko is its northern limit for the distance of five hundred and fifty miles from the sea. On this immense surface there are said to be only about thirty-four thousand inhabitants, of whom nineteen thousand are Indians under the conduct of missionaries. The latter, however, notwithstanding their zeal for making converts, have not hitherto penetrated to the distance of more than about thirty leagues from the coast. The soil of this colony is so rich, that it might be rendered more productive than all the other Spanish possessions. Yet such is the indolence of the inhabitants, that few plantations are to be seen in the interior, and these are, in general, ill cultivated. The proprietors, however, obtain from them provisions, and a little cotton and sugar. In this colony great numbers of oxen and mules are bred, many herds of which belong to the missionaries.

The capital of Spanish Guiana is *San Thomas,* a town situated at the foot of a small mountain, on the southern bank of the Oronoko, and at the distance of near one hundred and fifty miles from the sea. The streets are straight and paved; and the houses are, for the most part, built of lime and sand, and formed with terraces at the top. On these terraces the inhabitants sleep, during the seasons of the greatest heat,

and without any injury to their health. San Thomas was founded in the year 1764. The capital of the colony before this, had been situated nearer the coast, but as it had been successively plundered by the English, the Dutch, and the French, the inhabitants removed hither, as a place of greater security. San Thomas is, at present, defended by a fort on the bank of the river opposite to the town, at a place called Port Raphael; and through which there is a communication between Guiana and the Spanish provinces of Terra Firma, north of the Oronoko.

The climate of this place is tolerably healthy. The trade winds are very regular from the month of November to that of May; but during the remainder of the year they are interrupted by calms. In the months of August, September, and October, storms are frequent, and the wind sometimes blows with the violence of a hurricane.

The exertions of industry in Guiana are excessively fettered by the difficulty of communication between the different parts of the country. The rivers are numerous, but are in general destitute of bridges, barges, or ferry-boats. There are few roads, and such as exist are not kept in repair.

On the shore of the Oronoko, farther inland than San Thomas, there is a town called *Cividad Real.* This was founded in the year 1759, but little is known respecting it. Of late years, however, it is said to have fallen into decay.

In the south part of the colony there is a lake called *Parima*, an expanse of water of considerable dimensions, but little depth. On its north western bank is an Indian town, the supposed capital of a country which has been believed to abound in gold, and thence to have had the name of *El Dorado.* The original information, respecting the existence of such a country, was received from Indians, who stated that they had been there. Many attempts have been made by Europeans to discover the country, but hitherto without success.

In the year 1780, a wild Indian presented himself before the governor of Spanish Guiana, and asserted that he had come from the borders of Parima. As soon as the persons to whom he was introduced knew, or thought they knew, the country in which he had resided, he was assailed with innumerable questions; and to all these he answered, with as much perspicuity and precision as could be expected from a person, whose most intelligible language consisted in signs. He succeeded in making them understand that, on the banks of that lake, there was a city, whose inhabitants were civilized, and regularly disciplined to war. He spoke of the beauty of its buildings, the neatness of its streets, the regularity of its squares, and the riches of its people. According to the account that he seemed to deliver, the roofs of the principal houses were covered with either gold or silver: the high priest, instead of pontifical robes, rubbed himself with fat, and then his attendants blew upon him a quantity of gold dust, so as to cover his whole body; and in this attire he performed the religious ceremonies. The Indian, with a bit of charcoal, sketched on a table a plan of the city. The governor, deceived by the ingenuity of this man, engaged him to serve as a guide to some Spaniards, whom he wished to send into the country of which he had spoken.

Six Spaniards were employed in the undertaking. They set off, and were conducted nearly five hundred leagues towards the south, through the most frightful roads imaginable. Hunger, the swamps, the woods, the precipices, the heats, and the rains, destroyed some of them. When those who survived thought themselves within four or five days journey of the capital, and hoped, in a short time, to reach the end of all their troubles, and the object of their desires, the Indian suddenly disappeared. This event dismayed them. They knew not where they were; and after having, for some time, wandered about, they all perished except one. This man resolved to disguise himself as an In-

dian. He threw aside his clothes, painted himself red with arnatto, and introduced himself among the Indians, by the knowledge that he had of many of their languages; and, after having continued some time with them, he found his way to the Portuguese settlements, whence, after a long detention, he was sent to Spain. He subsequently returned to Guiana, and died there in 1796, but was unable to give any account of the country which the Indian had pretended to describe.

Seventh Day's Instruction.

GUIANA CONCLUDED.

The Indians and natural Productions of Guiana.

In Guiana there are several distinct tribes of Indians. These, like other wild inhabitants of America, are more or less of a red or copper colour. Some of them are described to be extremely cleanly in their persons, and of peaceable and happy disposition; but others are disgusting, both in their persons and manners. They have, in general, bushy hair, of a shining black colour, which the men wear short, but the women very long.

The Indians, who inhabit that part of the country which lies betwixt the rivers Essequebo and Oronoko, are called *Caribbees*. They are of middle stature, and are well formed. Their complexions are light, when compared with those of other Indians: their features are agreeable, and the expression of their countenance is remarkable for sprightliness. The ornaments of the men consist of crowns formed of various coloured feathers, and occasionally a sash of boar's or tiger's teeth worn round the shoulder. The chiefs of families sometimes wear the skin of a tiger. They also have bits of

silver, and sometimes a green or yellow stone stuck in the cartilage or gristle of the nose.

The Caribbees are the most numerous and warlike of all the native tribes of Guiana. In times of peace they have neither sovereigns nor magistrates; but, during war, a chief is elected, who leads them to battle. Their weapons are bows and arrows, and large clubs made of a heavy kind of wood. They also use poisoned arrows, which they discharge through a reed by their breath. Their houses are scattered about the country, but at so short a distance from each other that, by the sounding of a kind of trumpet made of a large shell, they can soon assemble a force of many hundred persons. The Caribbees are an industrious people. The chief employments of the men are hunting and fishing; the women perform the in-doors labour; and cultivate plantains and cassava, or manioc, as additional food. They collect wax, a kind of balsam called balsam capivi, different kinds of wood and staves; and they exchange these and other articles with Europeans for fish-hooks, knives, hatchets, fire-arms, combs, looking-glasses, and beads.

Their huts, or wigwams, are formed of interwoven branches, and covered with the leaves of palm-trees. Their furniture is simple, but sufficient for their wants. It consists of a few earthen pots of their own making, some calabashes and baskets, a stone to grind their corn, and another to bake their cassava bread upon, a fan to blow the fire with, a wooden stool, a sieve, a press to squeeze the cassava, and a cotton hammock to sleep in. Every family has a boat, or canoe, to travel in upon the rivers. The only vegetables that these people cultivate are yams, plantains, bananas, and cassava.

It is an undoubted fact, that the Caribbees have been known to tear and devour the flesh of their enemies slain in battle. But this practice is generally supposed to have arisen more from a spirit of revenge, than from that horrid depravity of taste which would lead them to feed upon human flesh.

The funeral ceremonies of this people are very ex-

traordinary. When a Caribbean chief dies, his body is put into a hammock, and hung up in his house. Here it is left in a bed of state for a month; and, during all this time, the females of the deceased alternately keep watch on each side of the body, to prevent a single fly from alighting upon it. In order to judge of the hardships of this duty, it is only necessary to be informed that the country inhabited by the Caribbees lies almost under the equator, and is scorched by a vertical sun. At the end of the year the body is disinterred: the bones are collected into a basket, and hung up in the hut of one of the nearest relatives.

The wild and marshy coast, which lies between the rivers Demerara and Surinam, is inhabited by a tribe of Indians called *Worrows*. These, though not perhaps the most cruel, are the most despicable people of Guiana. They are above the middle size. Their features are large and disagreeable: the colour of their skin is much darker than that of the Caribbees, many of them go quite naked, and are disgustingly filthy. Such clothing as they use, is generally made of the bark of trees. For ornaments they suspend oval plates of silver to the cartilage of their noses, and they are said to live chiefly on crabs and fish.

The *Accawaws* inhabit that part of Guiana which is contiguous to the sources of the rivers Essequebo, Demerara, and Berbice. These people are above the middle size, and have lighter complexions, and more agreeable features than the Worrows. In their lower lip they make a large round hole, which they fill with a piece of wood: this is cut so as to be even with the skin externally, but internally it presses against the gums. The manners of these Indians are grave, and their character is unusually cunning. They are much feared onaccount of the poisons which they are said to prepare. In revenging an insult, it is asserted that they sometimes administer poison by concealing it under

their nails. It is also said, that they are so distrustful as to palisade the ground around their villages with poisoned spikes. The articles of commerce, which the Accawaws dispose of to Europeans, consist chiefly of slaves, monkeys, parrots, ebony and other curious kinds of wood, arnatto, winter's bark, wild nutmeg, wild cinnamon, and balsam of capivi.

In the back settlements of Demerara and Surinam, and at the distance of about sixty miles from the coast, is found an interesting tribe of Indians, called *Arrowauks*. These people are very different from most of the other Indian nations. They are well formed and of light colour. Their features are regular, their teeth white, their eyes black and piercing; and the whole expression of their countenance is animated and agreeable. The women, when young, are slender and well proportioned: many of them are then beautiful; but when they are old their skin becomes flaccid, and they are often extremely disgusting. The men have scarcely any beard. They wear a cord round the waist, to which, both before and behind, is attached a piece of cloth. The women wear small cotton aprons, on which are strung glass beads of different colours; and, on festival days, they are ornamented with caps of feathers, and with strings of beads round their wrists, arms, ankles, and legs. The Arrowauks are a lively, friendly, and timid people. They not only live in peace with most of the other Indian nations, but are peculiarly attached to Europeans. When provoked they sometimes go to war, and in their combats they use bows and arrows, and large clubs made of iron wood. They likewise use poisoned arrows, which they blow through hollow reeds. The art of blowing these arrows is practised by them from childhood, and they acquire so much dexterity in it, that they can hit a small object at the distance of thirty or forty yards. These arrows are chiefly used for the killing of monkeys.

The Arrowauks do not constantly reside on one spot,

but are continually roving from place to place, and generally prefer the sides of rivers and creeks for their habitations. These are made by driving four forked poles perpendicularly into the ground, so as to form a square, and uniting them by four others laid horizontally: the roof is afterwards made by poles, laid laterally, and covered with immense leaves of a kind of a palm-tree. From the bread of cassava they make a fermented liquor, which in taste is somewhat like ale; and, in the use of this liquor, both men and women are often very intemperate. Though they reside at a great distance from the sea, the Arrowauks have canoes, sometimes eighty feet in length, in which they paddle up and down the rivers.

The *Taiiras* are settled on the sea-coast, between Surinam and the river Amazon. These are an exceedingly numerous tribe, being computed, in this settlement alone, to amount to near twenty thousand. They are described to be a peaceable, but indolent people, and in many particulars to resemble the Worrows.

The *Piannacotaus* are a tribe that live very far inland. Of these people little is known. They are said to be enemies to the Europeans, and to refuse all connexion or dealings with them.

All the Indians of Guiana are supposed to believe in the existence of a God, whom they consider to be the cause of all good. They likewise believe in the existence of a race of malevolent beings, of inferior power, whom they suppose to be the authors of all evils that befall them. To the former they offer no prayers, but they supplicate the latter whenever they are oppressed by misfortune. Each family has a person who performs the double office of priest and physician, and who is supposed to have great influence with the inferior deities, both in averting and afflicting evils. Christianity is preached among them, but so long as they see the vices of the

greater number of those who call themselves Christians, and who are a disgrace to Christianity, little hope of success can be entertained.

Polygamy is admitted among all the tribes. Every Indian is allowed as many wives as he can keep, but he seldom takes more than one, and of her he is extremely jealous. The chief vices of these people are excessive drinking, when opportunity offers, and an unaccountable indolence, except when occupied in hunting or fishing. The females marry as early as the age of twelve years. The marriage ceremony consists simply in the young man's offering a quantity of game and fish of his own catching. If the female to whom he offers this accept it, he next proposes the question, "Will you be my wife." If she answer this question in the affirmative, the matter is settled, and the nuptials are celebrated at a drunken feast, when a house and furniture are provided for the young couple.

Among several of the tribes, when an Indian is dying, the malevolent deity, or "Yawahoo," as he is called, is at midnight exorcised by the priest. This is done by rattling a calabash filled with small stones, pease, and beads, and accompanying the noise by a long speech. When the Indian is dead, his body is first washed and anointed, and then buried in a new cotton bag, and in a sitting position, his head resting on the palms of his hands, his elbows on his knees, and all his implements of war and hunting by his side. During this time his relatives and neighbours rend the air by dismal lamentations; and soon afterwards, by a drunken riot, they drown all their sorrows. But of all their instances of regard for their deceased friends, none is so extraordinary as what is called the feast of the dead. The day of this ceremony is appointed in the council of their chiefs, who give orders for every thing which may enable them to celebrate it with magnificence. The riches of the nation are exhausted on these occasions. All the neighbouring people are invited to partake of the feast, and to be witnesses of the solemnity. All who have died since the

last festival are taken out of their graves. Those who have been interred, even at the greatest distance from the villages, are diligently sought for, and brought to this great rendezvous of bodies. This strange festival is more or less in use among all the American Indians, bordering on the gulf of Mexico, on the Missisippi, and on the Oronoko, and is probably a remnant of Mexican superstition. A pompous reinterment is given to the dead; and games of all kinds are celebrated on the occasion.

The *natural productions* of Guiana are various and interesting. An European, on first landing, is surprised by the novelty of the scenes that are presented to his view. In these, the objects that chiefly excite his attention are the different species of palm-trees, particularly the bananas, cocoa-nut, and plantain trees.

Cocoa-nut trees grow to the height of fifty or sixty feet. Their stems, like those of other palms, have no leaves except at the top. These are from twenty to thirty in number, and each about fifteen feet long, narrow, and pinnated, or cut at the sides into many divisions. The nuts are of large size, and grow in clusters, from a stalk, that issues from the trunk, at the place where the leaves or branches spring. This tree affords to man food, clothing, and the means of shelter. The kernel of the nut is used as food, in various modes of dressing; and the milk or fluid that is contained within it, serves as a cool and agreeable beverage. Of the fibrous coat of the husk a kind of cordage is made. The inner bark of the stem is sometimes manufactured into clothing; the stem itself serves as timber for houses, and the leaves as thatch to cover them.

The *banana* and *plantain trees* are other kinds of palms. Of these the former does not grow to the height of more than ten or twelve feet. It bears its fruit in bunches, so large as to weigh from fifty to seventy pounds each; and the fruit is somewhat shaped

like a carrot, but equally thick at each end. When roasted, the Banana is eaten as bread. The plantain tree is more lofty than the Banana. The fruit of the plantain is generally gathered before it is ripe, and is also roasted and eaten as bread, for which it is an excellent substitute.

The leaves of all the kinds of palms, when they first spring from the trunk, are folded over each other like those of a cabbage, and are considered a peculiar delicacy for the table. They constitute, however, a delicacy which is not often introduced, as, by the cutting of them away, the tree is always destroyed.

Another species of fruit, common in this country, is the *guava*. This is about the size of a golden pippin, of somewhat oval shape, and incloses a sweet and reddish pulp, full of small seeds. It grows on a tree the leaves of which are not unlike those of a plum-tree. The pulp of this fruit is sometimes eaten raw, but is most commonly made into a marmalade or jelly, and in this state is not unfrequently imported into Europe.

Lemons, oranges, limes, and *shaddocks,* are all very common in Guiana. The latter are a fruit of the orange species, of light yellow colour, and as large as the head of a child. Their pulp is of a pale red colour, and much esteemed by the inhabitants.

The *mammee apple* grows on a tree about the size of an orange tree, is nearly round, of five or six inches in diameter, and covered with a coarse rough skin. Its pulp has the colour and consistency of a carrot, and incloses two large stones with bitter kernels. It has an acid and extremely delicious flavour, and in fragrance is superior to most of the fruits of the country. *Pine-apples,* as already stated, are in great abundance, in nearly all the fertile parts of Guiana. The *Avoira* is common in Surinam. It is a fruit about the size of an Orleans plum, and of a deep orange colour, nearly approaching to red. This fruit grows upon a species of palm tree, and is less remarkable for the excellence

of its flavour than for its beautiful appearance. The negroes exercise much ingenuity in forming rings out of the stones: these they decorate with cyphers, initial letters, and other devices, and then dispose of them to Europeans, who mount them in gold. *Aligator pears*, or *avocados*, are found in many parts of Guiana. This is a fruit shaped somewhat like a pear, and produced by a species of bay tree. When ripe it contains a pulp of yellow colour, of consistence somewhat harder than that of butter, and in taste not much unlike marrow. The negroes frequently use these pears as part of their food.

Among the productions of Guiana that are useful in commerce, are *sugar*, which has been already described, and *coffee*. The latter is the seed of a shrub, which, for the convenience of gathering the fruit, is seldom allowed to grow higher than a man can reach; and a good tree is said to produce three or four pounds weight of fruit at each crop. In many of the plantations the *cotton* tree is cultivated. The cotton of commerce is a downy substance, which envelopes the seeds. The seed vessels are each about the size of an egg, are divided into three parts, and, when ripe, open and disclose their cottony contents, which are as white as flakes of snow. *Cacao* trees are also grown in many parts of Guiana. *Chocolate* is a preparation from the seeds or nuts of these trees. The latter are each the size of an olive, and grow about thirty together in a fruit, which, when ripe, is of oblong shape, and of yellow colour like a large lemon.

The usual kinds of grain cultivated in Guiana, are *rice*, *Guinea corn*, and *maize* or *Indian corn*; and the most important roots are, yams and cassava. *Yams* are cultivated nearly in the same manner as potatoes are with us. They sometimes grow to the weight of thirty or forty pounds each, have a sweet and pleasant taste, and are eaten either boiled or roasted. These roots constitute the principal food of the slaves

throughout the West Indies. *Cassava*, or *manioc*, is the root of a shrub which grows to the height of about three feet. There are two species, distinguished by the appellation of sweet and bitter cassava. They are each soft and farinaceous, and in colour, size, and shape, much resemble European parsnips. The sweet cassava, when roasted, is an agreeable and healthy food. The bitter cassava, when raw, is a fatal poison both to man and beast, but when prepared by fire, it is not only a safe food, but, in this country, it forms the most natural bread of Indians, Europeans, and Negroes. The roots are ground or grated, then pressed to separate the juice, and afterwards formed into thin round cakes, which are baked on a hot stone.

The quadrupeds of Guiana are very numerous. The woods abound in *monkeys* of different species, some of which are of great size and strength, and others extremely small. Most of them have long tails, which they are able to coil round the branches of trees to support themselves in climbing. There are two or three species of *deer;* and the forests are inhabited by several animals of the *tiger* kind. *Armadillos, sloths, porcupines*, and *bats* of enormous size, are frequently seen.

The wild and morassy places abound in *serpents*, and in numerous kinds of reptiles, particularly *alligators* and *guanas*, the latter of which are a favourite food of the inhabitants.

Few countries abound more in birds than Guiana; and many of the species are remarkable for extreme beauty and brilliancy of plumage. *Vultures* and *eagles* are very common in some parts. *Parrots* and *macaws* are innumerable; but few species are more interesting than the *humming-birds*. These are so small that some of them, when stripped of their feathers, are not much larger than blue-bottle flies.

Both the sea and the rivers abound in fish. One species, called the *gymnotus*, or electrical eel, has the power

of giving to any person who attempts to lay hold on it, a smart shock, resembling that from an electrical machine.

A species of crabs, called *land crabs*, are found in immense numbers in holes near the sea-shore; they are of somewhat square form, and are highly esteemed for the table. Among the insects are many large and beautiful kinds of *moths* and *butterflies*. There are also myriads of different species of *ants*, and two kinds of *fire*, or *lantern-flies*, which emit a strong and steady light in the dark. A large kind of caterpillar, the produce of a species of beetle, and called *groe-groe worm*, breeds among the young leaves of the palm trees, and, when roasted and properly seasoned, is considered a delicious article of food. *Scorpions* and *centipides* are very numerous; as are also a sort of insects somewhat resembling a flea, and called *chigoes*. The last are very troublesome; they insinuate themselves under the skin of the feet, and there, if not extracted, form for themselves bags, in which they deposit their eggs. Numerous ulcers, difficult to be healed, are formed by the irritation thus excited.

The mineral productions of Guiana are not very abundant. A reddish kind of jasper, susceptible of a high polish, is found in the form of pebbles on some parts of the coast of Surinam; and in the river Marawina a crystal pebble, called *Marawina diamond*, which, when cut and polished, is often set in rings and other ornaments. *Iron ore* is not uncommon in many parts of the interior; but gold, silver, and precious stones, the production of adjacent countries, are seldom found in this.

Pag. 26.

Eighth Day's Instruction.

RIVER ORONOKO.

THE northern boundary of Spanish Guiana is the *Oronoko*, a river the most extensive of all the South American streams, except the Amazon; and the sources of which are now scarcely more known to the Spaniards, than those of the Nile were to Europeans before the travels of Mr. Bruce. These sources are believed to spring among the mountains north-west of the lake *Parima*, in the central parts of Guiana. But the savage character of the adjacent Indians has hitherto rendered access to this part of the country too dangerous to be attempted.

From its source to the *Atures*, the Oronoko traverses a country which it is believed to fertilize to little purpose; and which will probably long continue abandoned to its native possessors. Near the Atures it directs its course toward the north. Here are some cataracts formed by rocks across the stream, down which the water rushes with terrific noise, and over which no vessel whatever can pass.

Lower down, and about the sixth degree of north latitude, the *Meta* falls into the Oronoko, on its northern shore, and forms important commercial relations between the whole eastern part of the kingdom of Santa Fe and Spanish Guiana. This river is navigable through a great extent of country, but its banks are still a wilderness, or are inhabited only by Indians, who have an aversion equally decided against social life and agricultural occupations: they are wild, though not ferocious; and being as little qualified for attack, as they are for defence, they preserve their independence only by flight. Numerous other rivers fall into the Oronoko, many of which also are navigable; and along several parts of their banks are fertile grounds,

where great numbers of cattle, horses, and mules are fed.

The navigation of the Oronoko, from the Meta downward, is far from being so easy and certain as the magnitude of the river might lead us to suppose. Interspersed with islands that obstruct its channel, and throw its bed sometimes towards the right bank, and sometimes towards the left: occupied by rocks of various size and height, some of which are on a level with the water, and others beneath its surface; and being subject to dreadful gusts of wind, it can here be navigated only by good pilots, and in vessels of peculiar size and construction.

At the distance of about a hundred and twenty miles from the sea, the Oronoko, like the Nile, forms, by its numerous streams or channels, a kind of Delta or fan. These streams are spread over a tract of country sixty miles in extent along the sea-coast; and are upwards of fifty in number, though not more than seven are navigable by vessels of burthen. The islands that are formed by them are inhabited by a tribe of Indians, called *Garaunos;* but the difficulty of navigation is so great, that even the Indians themselves are sometimes in danger of being lost. Though they subsist by a fishery, which obliges them incessantly to navigate the openings and inlets of the islands, it is requisite they should always know exactly where they are; yet these very men, amphibious as we may almost consider them, are frequently perplexed, and are obliged to seek for the current, that they may let it carry them to the sea, in order that they may enter by the channel that is adapted for their return. This expression of seeking a current may seem extraordinary to those persons who are not aware, that there is a certain skill necessary to discover it. The channels of the Oronoko are here so numerous, and have such various directions that, for the most part, no current can be perceived. In some of them the eddies and winds establish false currents, which carry the navigator up instead of down the river. The use of a compass, when he is once lost,

will not secure him from losing the direction he ought to take, and even from returning to the very point whence he set out. All these circumstances evince the necessity there is of having a good pilot, either to enter, or to go out of the Oronoko. One of the mouths of this river, is called the "Ship's Mouth," because it is the only one by which vessels of two or three hundred tons burthen can enter.

Few parts of the world are more calculated to captivate the admiration of the naturalist than the country adjacent to the banks of this river. In some places these banks are bordered by forests of the most majestic trees imaginable; are enriched with underwood, and filled with birds of exquisite plumage. Several kinds of monkeys animate the scene, and amuse the voyager up the stream, by their cries, their leaps, their grimaces, and feats of agility. In other parts immense plains, covered with excellent pasture, afford to him a relief from the sameness of forest scenery. Every thing concurs to excite his admiration of the order, the wisdom, and the harmony of nature.

Like the Nile, and other great rivers, the Oronoko has an annual and periodical rise. This varies according to the wetness of the season, but the ordinary rise, before the town of San Thomas, is about twenty-six feet. The river begins to flow in the month of April, and to fall about the first of October.

The Oronoko abounds in fish, the kinds of which are innumerable: turtle are also extremely numerous. The Indians catch these animals and dry their flesh for food, and they extract a great quantity of oil from their eggs. Alligators, seals, and other amphibious animals, are found in the waters of this river.

Narrative of the Voyage of Messrs. HUMBOLDT *and* BONPLAND *down the River Apuré, and thence up the Oronoko.*

THESE gentlemen had been several months in South America, and had arrived at *San Fernando,* a vil-

lage on the banks of the Apuré. Here they remained three days, in order to make preparations for their voyage down that river. They hired a large canoe, and a pilot and four Indians to navigate it. In this canoe a sort of cabin was constructed at the stern, with leaves of the fan palm: some ox-hides were stretched on frames of Brazil wood, to serve for a table and benches; and the travellers laid in a month's provisions, consisting of fowls, eggs, plantains, cassava, and other articles. The Apuré abounds in fish, manatees, and turtles; and its banks are frequented by an innumerable quantity of birds; among which are two that may be considered as the pheasants and turkies of these countries. The travellers, consequently, added to their provisions fishing instruments and fire-arms; they also added a few casks of brandy, to serve as a medium of barter with the Indians of the Oronoko.

The river Apuré, like the Oronoko, has its periodical inundations, and overflows a great part of the adjacent country. In the rainy season the horses that wander in the savannas, and have not time to reach the rising grounds, perish by hundreds. The mares, followed by their colts, may often be seen during part of the day to feed on the grass, the tops of which alone wave upon the surface of the water. In this situation they are sometimes pursued by crocodiles; and it is not unusual to find marks of the teeth of these carnivorous reptiles on their thighs. The carcases of such as perish attract innumerable vultures, which devour the putrid remains, and thus act as the scavengers of this torrid climate.

At San Fernando the breadth of the *Apuré* is about thirteen hundred feet. Notwithstanding the great distance of this place from the sea, several cetaceous animals, in appearance resembling porpoises, were observed by Baron de Humboldt to play about, in long files, on the surface of the water.

The travellers embarked on the 30th of March. Two days before this the weather had been stormy, but when they left San Fernando, it was clear and intensely hot.

In the early part of their voyage they saw, on the left bank of the river, a tribe of Indians called *Yarurbes*, who live by hunting and fishing, and who supply the European markets with skins of the jaguar, or American tiger. They had a few huts, constructed with reeds and the stalks of palm-trees. The individuals, whom Baron de Humboldt had an opportunity of seeing, had a stern look, an elongated eye, and high cheek bones; but the nose was prominent throughout its whole length. The missionaries, who resided in the neighbourhood, praised the intellectual character of this people, and stated, that they had formerly been a powerful and numerous nation.

During the voyage from San Fernando to San Carlos on the Rio Negro, and thence to the town of Angostura, Baron de Humboldt confined himself to writing, day by day, either in the boat, or where they disembarked at night, whatever appeared to him worthy of observation. Violent rains, and a prodigious quantity of musquitoes with which the air was filled, occasioned the only interruptions that were experienced in this labour.

The voyagers passed through a land inhabited only by tigers, crocodiles, and a species of quadrupeds belonging to the genus Cavia of Linnæus. They saw flocks of birds crowded so close together, as to appear like a dark cloud that every instant changed its form. The banks of the river were generally covered with a forest, the trees of which were very singularly disposed. In some places the bushes formed a kind of hedge, about four feet high, which appeared as if it had been clipped by the hand of man. A copse of cedars, ligneum vitæ, and other trees, rose behind this hedge. Palm-trees were here very rare. In this scene of untamed and savage nature, the voyager along the river, at one moment is delighted with the sight of the jaguar, or some other wild quadruped; and at another with the peacock, pheasant, or cassew bird with its black plumage and tufted head moving slowly along the verge of the woods. Gliding down the stream, animals of the most

different classes succeeded each other. Crocodiles, to the number of eight or ten, were seen stretched motionless on the sand, and, with their jaws open at right angles, reposing by each other, along the whole course of the river. The species was precisely the same as that of the Nile, and the length of many of them was twenty feet and upwards.

The voyagers had been informed at San Fernando, that scarcely a year passed without several persons, particularly women, being devoured by these animals. They had been informed, among other stories, of a young girl who, by singular intrepidity of mind, had saved herself from the jaws of a crocodile. When she had felt herself seized, she sought the eyes of the animal, and plunged her fingers into them with such violence, that the pain forced the crocodile to loose its hold, after having bitten off the lower part of her left arm. The girl, notwithstanding a great quantity of blood which she lost, happily reached the shore, by swimming with the hand she had still left.

Near the *Vuelta del Joval* the voyagers saw a jaguar, which surpassed in size all the tigers which they had seen in the collections of Europe. It held under its paw a quadruped of considerable size, which it had just killed; and flocks of vultures were waiting to devour the remains of its repast. Every now and then they advanced within a few feet of the jaguar, but drew back on the least movement made by him. The voyagers got into their little boat, to observe more closely the manners of these animals; but the jaguar, disturbed by the noise of the oars, retired slowly behind the bushes. The vultures, profiting by his absence, soused upon the quadruped he had left, but the animal, leaping into the midst of them, seized the carcass and carried off his prey.

The voyagers passed the night, as they had before done, under the open sky, but in a plantation, the proprietor of which employed himself in hunting tigers. Nearly naked, and with a complexion as brown as a Samboe,

Signior don Ignacio (for so he was styled) considered himself as a white. His wife and daughter, as naked as himself, were called *Donna* Isabella and *Donna* Manuela. This man, proud of his nobility, and of the colour of his skin, had not taken the trouble to construct for himself even a hut of palm-leaves, but swung his hammock between two trees. The night was stormy; and Donna Isabella's cat, which had taken up its lodging in a tamarind-tree, fell into the hammock of one of the voyagers, who, conceiving himself attacked by some wild beast, raised a terrible outcry, which not a little discomposed the rest of the party. It rained in torrents all night; and, next morning, the host congratulated the drenched and shivering voyagers on their good fortune in not sleeping on the strand, but "among whites and persons of rank." Don Ignacio piqued himself on his valour against the Indians, and the services that he had rendered to God and the king, in carrying away children from their parents, to distribute them in the missions. "How singular a spectacle," says Baron de Humboldt, "to find in this vast solitude a man who believes himself of European race, and who knows no other shelter than the shade of a tree, yet who entertains all the vain pretensions, all the hereditary prejudices, and all the errors of long civilization."

Proceeding down the river, the voyagers passed the ensuing night on a naked but extensive strand, where they had the greatest difficulty to find dry wood for their fires. The night was calm and serene, and beautifully moonlight. The crocodiles were stretched along the shore, and they all turned themselves towards the fires which the voyagers had lighted. As there were no trees, the voyagers stuck their oars into the ground, and to these they fastened their hammocks. Towards midnight a terrific noise commenced in the neighbouring forest, sufficient to appal the stoutest heart. It proceeded from the wild beasts, which, according to the report of the Indians, "were keeping the feast of the full moon." Amidst this extraordinary clamour, Baron de Humboldt

says, the Indians could discriminate the soft cries of the smaller monkeys, the moans of the alouates, the howling of the tiger, and the couguar, or the American lion, the pecary and the sloth, and the voices of various kinds of birds. Sometimes the cry of the tiger came from the tops of the trees; and in that case it was followed by the sharp and long whistling of the monkeys, which appeared to flee from the danger that threatened them.

On the 3d of April the voyagers caught a fish, known by the name of *caribe*, or *caribito*, from its delighting in blood. These fish, though of small size, are the dread of the Indians, several of whom showed the scars of deep wounds in their legs and thighs made by them. The caribes live at the bottom of rivers; but, if a few drops of blood be shed in the water, they rise by thousands to the surface. As no one ventures to bathe where the caribe is found, it becomes as great a scourge in the water as the musquito is in the air.

In the evening of this day the voyagers passed the mouth of the *Cano del Manati*, thus named on account of the immense number of manatees that are caught there every year. These herbivorous, yet amphibious, animals, attain the length of ten or twelve feet, and the weight of six or eight hundred pounds. They abound in the Oronoko, below the cataracts; in the river Meta, and in the Apuré. Their flesh is savoury, and resembles pork; the fat is used in the cooking of food, and for lamps in the churches; and their hides, which are an inch and a half in thickness, are cut into slips, and serve for cordage and whips.

On the ensuing day the voyagers reached the mouth of the Apuré, where it unites its waters with those of the *Oronoko*. The aspect of the country was now totally changed. An immense plain of water stretched before them, like a lake, as far as they could see. White topped waves, occasioned by the conflict of the breeze and the current, rose to the height of several feet. Hitherto the air had resounded with the piercing cries of herons, flamingoes, spoonbills, and other birds; but the eyes of

the voyagers now in vain sought for water fowls. Here all nature appeared less animated. Scarcely could they discover, in the hollows of the waves, a few large crocodiles steering their way along the current by the help of their tails. The horizon was bounded by forests, but these forests no where reached so far as the bed of the river. A vast beach, constantly parched by the heat of the sun, desert and bare as the shores of the sea, resembled at a distance pools of stagnant water. In these scattered features of the landscape, in this character of solitude and of greatness, the voyagers recognized, in the Oronoko, one of the most majestic rivers of the new world.

They now proceeded first toward the south-west, on the left bank of the Oronoko, and afterward toward the south. The river here was so broad that the mountains of *Encaramada* appeared to rise from the water. At a little port, or rather landing-place, where they stopped to examine the nature of the rocks, they saw a party of *Caribbees*. A cacique was going up the Oronoko in his canoe, to join his friends in collecting turtles' eggs. He was seated beneath a sort of tent, which, as well as the sail, was constructed of palm-leaves. His cold and silent gravity; the respect with which he was treated by his attendants; every thing denoted him to be a person of importance. He was, however, equipped in the same manner as his Indians, who were all naked, armed with bows and arrows, and had their bodies painted red with annatto. The chief, the domestics, the furniture, the boat and the sail, were all painted red. Their smooth and thick hair, cut upon their forehead, their eye-brows painted black, their look at once gloomy and animated, gave to their countenances a singular hardness of expression. The women very tall, but disgusting from their want of cleanliness, carried their infants on their backs, and had their thighs and legs bound at certain distances by broad strips of cotton cloth. The flesh, strongly compressed beneath the ligatures, was swelled in the interstices. It is to be observed, that the Ca-

ribbees are as attentive to their exterior and their ornaments, as it is possible for persons to be, who are naked and painted red. They attach great importance to certain forms of body; and a mother would be accused of culpable indifference toward her children, if she did not employ artificial means to shape the calf of the leg after the fashion of the country.

On the 6th of April, continuing to ascend the Oronoko, first toward the south, and then toward the southwest, the voyagers perceived the southern side of the granite mountains of *Encaramada*, inhabited by Indians of a gentle character, and addicted to agriculture. This people have retained a belief, that at the time of the *great waters*, when their fathers were forced to have recourse to their boats to escape the general inundation, the waves of the sea beat against the rocks of Encaramada; and a similar belief prevails among nearly all the tribes of the Upper Oronoko. The Tamanacks say that, in this great deluge, " a man and woman saved themselves on a high mountain called *Tamanacu*, situated on the bank of one of their rivers; and that, casting behind them, over their heads, the fruits of a particular kind of palm-tree, they saw the seeds contained in those fruits produce men and women, who repeopled the earth. Baron de Humboldt says, that a few leagues from Encaramada there is a rock, called *Tepu-mereme*, or " the painted rock," which rises in the midst of a savanna. It displays the resemblance of animals and symbolic figures; and he was shown many other rocks on which similar hieroglyphic figures were placed at great heights, that they could be accessible only by constructing lofty scaffolds. When he inquired of the natives how these figures could have been sculptured at so great a height, they answered with a smile, as if relating a fact of which a stranger only could have been ignorant, that at the period of the *great waters*, their fathers went to that height in boats. These ancient traditions of the human race, which we find dispersed over the whole surface of the globe, like the

relics of a vast shipwreck, are highly interesting in the philosophical study of our species.

In their progress from Encaramada the voyagers landed on an island near the *Boca de la Tortuga*, celebrated for a fishery of turtles. About three hundred Indians were here living in huts of palm-leaves. They consisted of individuals of several tribes: and each tribe was separately encamped, and was distinguished by the painting of their skins. A missionary from the Uruana, a native of the country, had come to meet them, for the purpose of celebrating mass during what was called the "harvest of eggs," of procuring oil for the church, and keeping order among the different tribes. He was astonished to see Europeans; and thought the object of their voyage very mysterious: he could not imagine it possible that they should have left their country to be devoured by musquitoes, and to measure lands that were not their own.

The turtles that approach the shores of the islands in this neighbourhood weigh from forty to fifty pounds each. In the month of January they issue in troops from the water to repose on the sands; and in March they begin to lay their eggs. For this purpose each turtle, with its hind legs, which are strong and furnished with claws, digs a hole about three feet in diameter and two feet deep. They generally deposit their eggs in these holes during the night, and cover them up before morning. The collecting of the eggs by the Indians is conducted with great regularity. The ground is measured out and distributed among the tribes; and from the eggs they obtain a great quantity of oil. This they put into large jars for use. Each turtle is reckoned to lay from a hundred to a hundred and twenty eggs. The Indians are said to collect annually about five thousand jars of oil; and, to obtain this quantity, it is estimated that three hundred and thirty thousand turtles must deposit near thirty-three millions of eggs, on the shores that are appropriated to this harvest.

The voyagers, on the 7th of April, passed the mouth

of the *Arauca*, celebrated for the immense number of birds that frequent its banks; and, at a mission, a little beyond this river, called *Uruana*, they were shown some heaps of a kind of earth which the Otomac Indians eat. The Oronoko, at a little distance from Uruana, was upwards of three miles in width. The shores were barren, and the rocks that bordered the river were destitute of vegetation. All the stones were covered with lizards. These animals were motionless, had their heads raised, and their mouths open, as if to suck in the heated air. The weather was still extremely hot, not a breath of wind was to be felt. The sun was at its highest elevation, and its dazzling light was reflected by the surface of the river, and contrasted with the reddish vapour that enveloped all the surrounding objects.

"How vivid," says Baron de Humboldt, "is the impression produced by the calm of nature, at noon, in these burning climates! The beasts of the forests retire to the thickets; and the birds hide themselves beneath the foliage of the trees, or in crevices of rocks. Yet, amid this apparent silence, when we lend an attentive ear to the most feeble sounds transmitted by the air, we hear a dull vibration, a continual murmur, a hum of insects, that fill, if we may use the expression, all the lower strata of the air. Nothing is better fitted to make man feel the extent and power of organic life. Myriads of insects creep upon the soil, and flutter round the plants parched by the ardour of the sun. A confused noise issues from every bush, from the decayed trunks of trees, from the clefts of rocks, and from the ground undermined by lizards, centipedes, and other animated creatures. These are so many voices proclaiming to us, that all nature breathes; and that, under a thousand different forms, life is diffused throughout the cracked and dusty soil, as well as in the bosom of the waters, and in the air that circulates around us."

Early in the morning of the 9th they arrived at *Pararuma*, where there was another turtle harvest. Baron de Humboldt here observed some missionary monks

seated on the ground, playing at cards, and smoking tobacco in long pipes. From their ample blue garments, their shorn heads, and long beards, he says they might have been mistaken for natives of the east. From one of these missionaries he purchased a new canoe, which, like all Indian boats, had been formed out of the single trunk of a tree, hollowed by the double means of the hatchet and fire. It was forty feet long, and only three feet wide. In the after part of it a low roof of branches was erected to keep off the burning rays of the sun; but it only admitted of those under it either to lie down, or to sit double; and their legs reached far beyond the covering, so that, when it rained, half the body was drenched.

Speaking of the Indians whom he saw at Pararuma, Baron de Humboldt says, that although they were naked, yet their bodies were so covered with paint, that, at a distance, they seemed to be dressed in laced clothes. And if *painted nations*, he adds, were to be examined with the same attention as *clothed nations*, it would be perceived that the most fertile imagination, and the most mutable caprice, have created the fashions of painting as well as those of garments.

In the camp at Pararuma he was surprised to observe that women, far advanced in years, were more occupied with their ornaments than the youngest women. He saw an Indian woman, of the Otomac nation, employing two of her daughters in the operation of rubbing her hair with the oil of turtles' eggs, and painting her back in a sort of lattice work of black lines crossing each other on a red ground. Each little square had a black dot in the middle, and the whole was a work which required incredible patience.

While the voyagers were at Pararuma they had an opportunity, for the first time, of examining numerous animals alive, particularly different kinds of monkeys, which before they had only seen in cabinets in Europe. These animals here form a branch of commerce, and are obtained at very low prices from the Indians of the

Oronoko. The voyagers purchased several of them, and kept them in cages, during the rest of their voyage up the river.

They left Pararuma on the 10th of April. In their voyage this day they were excessively annoyed by musquitoes, and suffered much from the parching heat of the sun. On the ensuing day they passed the mission of *Carichana*, the principal village of the nation called *Salivas*, a social, mild, and almost timid people. These Indians have a taste for music. In remote periods they had trumpets formed of baked earth, four or five feet long, and with several large globular cavities communicating with one another by narrow pipes, which sent forth the most dismal sounds imaginable. Of late, however, they had been instructed to play on European instruments.

The environs of the mission of Carichana appeared extremely delightful. The little village was situated in a plain covered with luxuriant grasses. A line of forests was seen in the distance; and the horizon was on every side bounded by mountains, partly covered with wood and of a dark tint, and partly naked, and exhibiting rocky summits.

As the voyagers proceeded, they found the course of the Oronoko to be in many places obstructed by blocks of granite rocks. They passed several *rapids*, or small cascades, made by rocks rising out of the bed of the river. In one place it was requisite for the Indians to row against the current, for more than twelve hours without cessation. They passed through channels that were not five feet broad. Sometimes the canoe was jammed between blocks of granite; and through all these passages, the water rushed with an horrible noise. This was called the cataract of *Cariven*.

From *Cabruta* to the mouth of the river *Sinaruco*, the left bank of the Oronoko is entirely uninhabited. They passed the mouth of the river *Meta*, and reached a mission called *San Borja*, where they found six houses, inhabited by uncatechized Indians, called *Gua-*

hiboes. They differed in nothing from the wild Indians. Their eyes, which were tolerably large and black, expressed more vivacity than those of the Indians who inhabited the ancient missions. The faces of the young girls were marked with round black spots, like the patches by which the women of Europe formerly imagined they set off the whiteness of their skin. The bodies of the Guahiboes were not painted. Several of them had beards, of which they seemed to be proud. Their shape was in general slender, and their countenances were sad and gloomy, but neither stern nor ferocious.

In the further ascent of the voyagers up the river, the torment of the musquitoes augmented. Notwithstanding the decrease of the heat, they had never suffered so much by them as they did near San Borja. They could neither speak nor uncover their faces without having their mouths and noses filled with these insects; and the extreme irritation of their skin rendered the heat almost intolerable. On the 14th of April they passed the mouth of the river *Parueni.* Beyond this the mountains of the *great cataract* bounded the horizon toward the south-east; and, as they advanced, they perceived that the shores of the Oronoko exhibited a more composing and picturesque appearance than had been observable in the lower parts of the stream.

At the great cataract the bed of the stream is divided by masses of rock, into various reservoirs and natural dykes. The water, however, is not, as at Niagara, heaved at once over a deep precipice, but it falls in a graduated series of small cascades. The spectator suddenly beholds a foaming sheet of water, a mile in length. Masses of rock, of dark ferruginous hue, shoot up from it, like lofty towers. Every small island and every rock are decked with crowded groups of stately trees. Above the surface of the water, a thick vapour incessantly hovers; and through this cloud of mist, formed by the spray of the stream, dart forth the tops of the aspiring palm-trees. When the glowing rays of the

evening sun are refracted in this mass of suspended vapour, the optical phenomena are truly enchanting. Rainbows alternately appear and disappear, and their image incessantly sports in the air.

Baron de Humboldt and his friend, after almost incredible difficulties, arrived at Fort *San Carlos*, where the Portuguese possessions terminate. From this place they proceeded to Guiana, along the *Casiquiari*, a wide branch of the Oronoko, which forms a communication by the *Rio Negro* with the *Amazon*.

Ninth Day's Instruction.

TERRA FIRMA.

Venezuela or Caraccas.

If, from Guiana, we cross the river Oronoko, we enter another of the Spanish possessions, called *Terra Firma*. This part of America was originally discovered by Columbus in the year 1498, and received the name of Terra Firma, or "Firm land," to denote that it belonged to the continent, and was not an island. Subsequently to the time of Columbus the Spaniards conquered it, made slaves of many of its inhabitants; and established colonists and missionaries in different parts, to collect the produce, and to convert the natives to Christianity. It extends from the western ocean, along the sea coast, to the Isthmus of Darien; and is bounded on the south by Guiana, Amazonia, and Peru.

The inhabitants of this and of other Spanish American territories have, during more than three centuries, groaned under the severest despotism, their commerce has been injured, their agriculture neglected, and the exertions of industry have been paralyzed. Galleons, and afterwards register ships, were exclusively permitted

to carry out European merchandize, and in return to bring back the gold and silver drawn from the mines of these colonies; and all other European nations were prohibited, by the most severe laws, from entering any of the colonial parts belonging to Spain. Under this system of restraint, the minds of a considerable portion of the inhabitants have, for many years, been influenced by a desire to follow the example of their brethren, the North American Indians, and to withdraw themselves from the gripe of European monopoly. The dread, however, of failing in an insurrection, the presence of a military force, and the connection of the public functionaries with old Spain, long held in check an unwarlike and divided population. The occupation of Spain, however, by the French troops, presented to the colonists an opportunity of commencing with ardour their struggle for independence. This opportunity was not lost; and the province of La Plata, and several parts of Chili and Peru, have been emancipated and thrown wholly out of the power of Spain.

By the liberation of all these countries from the Spanish yoke, not only the colonists themselves would be benefitted, but by the free intercourse that might be established, every nation of the civilized world would be a gainer; and even Spain herself, under the invigorating system of a free trade, would, probably, derive greater advantage, than she ever possessed in her days of monopoly. But these would not be the only advantages. Civilization would become more extended: Europeans would be able to traverse without impediment, not only for commercial but for philosophical purposes, every part of this extensive region; and at last the grand project might possibly be effected of forming, through the isthmus of Darien, that narrow wall of mountains which, three hundred years ago, arrested the noble ardour of Columbus, a short and direct passage to the eastern countries of the world. But while we look forward with hope to the emancipation of these important provinces, we cannot but regret that much of the

contest, has, of late years, been given up to needy adventurers from Europe, who seek only their own personal advantage, and who, under the pretence of patriotism, are acting with no other view than to enrich themselves and their followers by plunder.

The most important district of Terra Firma, is that called the "Capitania general of Caraccas," or the provinces of Venezuela.

CARACCAS OR VENEZUELA.

THIS country, which is still subject to the Spaniards, contains nearly a million of inhabitants, among whom are about sixty thousand slaves. It comprehends the province of Spanish Guiana, already mentioned, on the south; that of Cumana on the east; the island of Margaretta on the north-east; Venezuela in the centre; and the government of Maracaïbo on the west.

Near the shore the country is fertile, and in many parts is in a state of cultivation. In the interior it is mountainous; and beyond the mountains are extensive plains and savannas. From its situation, a few degrees north of the equator, this region might be expected to present only a land rendered uninhabitable by excessive heat. But so diversified is its climate, that, in several parts, the inhabitants enjoy the coolness of perpetual spring; whilst in others all the effects of a torrid region are experienced. This diversity of temperature is chiefly attributable to the mountains by which it is traversed.

In this part of America the year is not, as in Europe, divided into four seasons. There is neither spring nor autumn; and winter and summer complete the whole annual revolution. To what is called winter is assigned the interval of time between the months of April and November: this is the rainy season. The summer comprises the six remaining months, during which the rains are less frequent. In the rainy season,

the showers are heavy and almost incessant; and the discharges of torrents from the clouds often produce more water in a single day than the rains of Europe do in six. It has been remarked that, before the year 1792, the rains were accompanied by tremendous storms of thunder; but that, since that period, the rain, though it falls in great abundance, has not the usual accompaniments of a storm. Earthquakes are occasionally felt, particularly in the province of Cumana; but they are by no means so frequent as in some of the adjacent countries.

For fertility and richness of vegetable productions, few parts of America can be compared with this; and it enjoys the happiness of not possessing any mines of precious metals. By diligent search, indeed, the first conquerors discovered four mines of gold, but these are all now either lost or of no value. Gold and silver mines, as long as they last, are the tombs of multitudes who labour in them. They enervate, emaciate, and subject to a languishing life all such as are not stifled in their bosom. They destroy the germ of all the social and domestic virtues: banish every regard to order and economy, and encourage vice; and, when exhausted, they substitute poverty for prodigality and vagrancy for labour. The transient lustre which the possession of mines confers is, in this district, amply compensated by the abundant, the valuable, and inexhaustible productions of the soil. A few copper mines, in the jurisdiction of San Philippe, are all the mines that this part of America can boast, and these employ only a small number of hands.

A pearl fishery was formerly carried on between the islands of Cubagua and Margaretta, but this has, for many years, been abandoned. There are some salt-works at Araya in the province of Cumana; and several parts of the country abound in mineral waters.

In the Caraccas the agricultural industry, the great mass of population, the principal towns, and whatever is connected with an advanced civilization, are found

near the coast, and this coast extends more than two hundred leagues. All the vast districts of Spanish America, have for ages been governed, almost like separate states, by viceroys and captains-general. They have also, in a considerable degree, been peopled by Spaniards, or by the descendants of Spaniards, who have the name of *Creoles*.

Many of the *colonists* are possessed of ample fortunes; yet, by the enervating influence of a sultry climate, and by the rigour of a jealous government, their minds are so broken, that most of them waste their lives in luxurious indulgences, mingled with an illiberal and debasing superstition.

The full dress of a Spanish colonist was formerly a taffeta, satin or velvet coat and breeches, adorned with rich embroidery. The waistcoat was of gold tissue, or of silk with embroidery. He wore a cocked hat, and had by his side a silver or a gold-hilted sword. But this formality of dress is now nearly laid aside. Slouched hats, cropped and unpowdered heads, pantaloons up to the breast, and short vests, buttoned half way, are now the style in which the young Spaniards of the colonies appear, who, by their opulence and rank, are entitled to preside in the circles of fashion. Their highest ambition is to assimilate their manners to those of the French.

It is an invariable custom with this people to appropriate two, three, or sometimes four hours every day after dinner to sleep. Even those who are actively engaged in business, take care so to make their arrangements, that these do not interfere with their afternoon nap.

The Spaniards of the colonies usually marry very young, the girls as early as twelve, and the boys at fourteen years of age. Nothing is more common than to see a young couple, whose united ages do not exceed thirty years. A few years ago, children, who had not obtained the consent of their parents to marry, or who chose to save themselves the trouble of

applying for it, found no difficulty in accomplishing their wishes. They presented themselves to the curate of the place, in some private house, even in the street, or wherever they could meet with him, and, on the spot, passed through the formality. However ludicrous the manner of conducting this ceremony may appear to have been, it was sufficiently effectual to unite them for life in indissoluble bands. In the year 1803, however, a law was passed which declared that every marriage of a male under twenty-five, and a female under twenty-three years of age, should be illegal, unless contracted with the consent of the parents or guardians.

The Spaniards of South America cultivate their lands, and conduct much of their traffic by means of *slaves*, yet they have never carried on the slave trade in a direct channel. They have had no factories for this purpose on the coast of Africa, but they have chiefly purchased slaves from the people of other nations. M. Depons states, that, when he was in America, the number of slaves employed in the Capitania-general of the Caraccas, as well for culture as for domestic service, amounted to two hundred and eighteen thousand four hundred. By a royal ordinance, passed in the year 1789, it was recommended that masters should instruct their slaves in the christian doctrines, and that they should make them observe holy days and Sabbaths. It ordered, that comfortable food and clothing should be allowed to them; the quantity and the quality of which was to be determined by the tribunals. It further ordered, that the labour of each slave should be rated by the police judges. This article, however, in consequence of the great distance of most of the plantations from any civil officer, proved wholly nugatory. By the same ordinance male slaves under the age of seventeen, and beyond the age of sixty, were exempted from labour. In other countries the slave is condemned for life to suffer under an unjust master; but among the Spaniards, he may quit

the domain of the man who ill treats him. The most trifling allegation is sufficient to compel a master to sell the slave who does not wish any longer to serve him: he is not allowed to exact an exorbitant price, but must sell him at whatever price he purchased him. Nor can the purchase-money exceed three hundred dollars, whatever talent or qualification the slave may have to recommend him. Every slave, therefore, has it is in his power to effect his own redemption, by refunding to his master the sum which he originally cost, or by paying down to him the sum of three hundred dollars, in case he have advanced more than that amount. A written acknowledgment of the payment is a sufficient document of his manumission, and entitles him to the rank of a citizen. Hence it has arisen, that in the Spanish colonies, there have generally been more freed men, and descendants of freed men, than in any other.

The Indians of Caraccas.

In the Capitania general of Caraccas the Indian population is not very considerable. In the whole seven provinces the Indians are not supposed to exceed one ninth part of the whole population. They are, however, divided into numerous tribes. Most of these have a narrow forehead, black, lank, and long hair, sharp nose, large mouth, thick-lips, and broad face. They are generally copper-coloured, but this colour varies according to the country which they inhabit. With regard to their moral character, they are, for the most part, lazy, thoughtless, stupid, and deceitful. Such as live in the inland parts are not so cruel as those upon the coasts. Very few of the former are cannibals, whereas almost all the latter are. They possess a religious system, so involved in superstition, that it is almost impossible to be comprehended. They believe in the immortality of the soul, but their opinions respecting its destination after death, vary according to

their different tribes, or to the policy of their respective chiefs or priests. Some of them admit an evil principle only, whilst others admit both a good and evil principle. It is a common opinion of the Indians of Terra Firma that the soul, when separated from the body, cannot subsist without food. Some of them imagine that there is a creator of all things, who is entitled to their adorations. A few tribes imagine the sun to be the Supreme Being; and to him they attribute the productions of the earth, the scarcity or abundance of rain, and all temporal blessings. There are some on the banks of the Oronoko, who render the honours of divinity to toads. These animals they carefully keep in covered vessels, and pray to them for rainy or fair weather, as occasion requires; and they are so fully persuaded that toads have the power to grant their requests, that they beat these creatures every time their prayers are not complied with. Some of the tribes have no other worship than to dance to the sound of noisy instruments, before small wooden idols. With regard to the state of the soul after death, several of them imagine that it enjoys repose in the same field which the body cultivated when alive; others believe that it is conveyed to certain lakes in the belly of a huge serpent, which ushers it into a delightful land, where it passes its time in dancing and drinking.

It is a prevailing notion with them all, that brute animals are possessed of souls as well as men. Hence, when an Indian kills a wild beast, he opens its mouth, and, being himself fond of strong liquor, makes it swallow an intoxicating draught. The intention of this is that the soul of the dead animal may report to the rest of his species, the good reception he has met with, and that consequently these may be encouraged to come for the purpose of partaking of a similar favour.

The Indians of the *Palanka* nation, who inhabit the northern bank of the Oronoko, about the fifth degree of north latitude, never engage in any hunting party, without making the oldest huntsman drink one or two

large bumpers of the strongest liquor that can be procured. His companions then lead him about, in a state of intoxication, imagining that the soul of the drunken Indians, wafted upon the blast, will inform the game where there is likewise something for them to drink, and thus persuade them that, instead of running away, they should approach, and let themselves be killed.

All the tribes of Indians maintain, that there are not under the sun any enjoyments more pure or more exalted than intoxication and indolence. The liquor they chiefly prefer is rum. All the labours of agriculture and domestic economy devolve upon the women. The men do little else than eat, drink, sleep, and hunt.

This is generally the case. But there are some exceptions. The *Otomacs*, who inhabit the high grounds of the Oronoko, are an active and intelligent race of Indians. They pass their time in almost continual exercise and social joy. At sunrise, all who are capable of labour repair to the houses of their respective chiefs. These nominate such as are to go out that day to fish, and such as are to go in search of turtles, or to hunt. In seed-time or harvest, a certain number of them are appointed to the labour of the fields, the fruits of which are deposited in public granaries, in order to be afterwards divided by the chiefs. It is said, that no Indian of this tribe ever goes to labour two successive days. The Otomacs, who are not otherwise engaged, pass their time in amusement, and particularly in playing at ball, in parties of twelve against twelve.

The females manufacture a coarse kind of earthen ware. They also work, in a very curious manner, mats, baskets, and bags; using for that purpose a fine kind of fibrous substance, produced from the bark of a tree. These are their employments in the morning: about noon they quit their labour, and join their husbands at play, ranging themselves twelve on each side of the party already formed, so as to make forty-eight persons

in each game. The ball they use is made of an elastic kind of resin. The men strike it with their right shoulders, and are not allowed to touch it with any other part of their body; and the women play with a kind of battle-door, which they wield with incredible dexterity.

M. Depons, describing a visit which he made to these Indians, says, that at four o'clock in the afternoon the fishermen, who had been despatched to their labour in the morning, arrived with their canoes full of fish. On this the party at play immediately broke up: all went to wash themselves in the river, and afterwards retired to their respective homes. The women and children unloaded the boats, and carried the fish to the house of the chief, who distributed them among the several families of the village, in proportion to their number. At night they all began to dance, and they continued in this amusement till midnight, after which they retired to rest; and the same routine of exercises was repeated every day.

The Otomacs are an excessively voracious people. They sometimes devour a kind of earth, which is found in their country, and which they mix and knead with alligator's fat. Some of the Indians that inhabit the banks of the river Meta likewise eat earth; and there are some on the banks of the Casiquiare, who make ants their chief food. Baron de Humboldt says, that he has seen Indian children, of the tribe of *Guaymas*, draw out of the earth and eat scolopendras or centipedes, eighteen inches long and seven inches broad.

The *Guaraunos*, or *Guaraons*, who inhabit the islands formed by the mouth of the Oronoko, enjoy a comfortable subsistence. Their position insures them as much fish as they can consume. They have also a kind of palm tree, the pith of which furnishes them with food, and from the juice of which they make a kind of wine. These Indians have not yet received the Spanish laws, nor the blessings of Christianity. Situated between the civilized part of Guiana, and the province of Cu-

mana, they stand independent, within the Spanish government, and are Pagans in the midst of Christians. This phenomenon is owing to the flat surface of the land which they inhabit, and which, during six weeks in the year, is nearly covered with water by the rise of the Oronoko. At this season they may be said to live on the tops of trees; for, in order to raise their abodes above the surface of the waters, they support them on the cut trunks of mangrove-trees, and on those of a kind of palm-trees, which grow in morassy places. The manners of the Guaraunos have always been the same. Even in the sixteenth century they are described to have been a people who built their houses in trees. By the effect of long habit, these Indians are able to run with perfect safety on muddy lands, where whites, negroes, or other Indians would not dare to trust themselves.

Such vast swarms of various insects are bred here, as render these islands uninhabitable to all except the natives. The Guaraunos being also a peaceable nation, and never committing depredations on the property of their neighbours, the Spanish government have considered it inexpedient to molest them. Their number is supposed to be about eight thousand. They frequent the civilized villages to sell the fish which they catch, and some articles which they manufacture.

In their general habits and customs all the Indians of Terra Firma nearly resemble those that have been already described. Their *marriage* ceremonies consist in little else than dancing and drinking to excess. M. Depons describes one of these marriages. He says, that the relations, neighbours, and friends of both parties were invited. The men who attended carried wood and straw to build a hut for the young couple: the women presented to the bride as much fish, fruit, bread, and liquor as was necessary for the celebration of the marriage. The men sung an epithalamium to the bridegroom, and the women to the bride. They danced and sang till night; and, as soon

as darkness succeeded to the light of day, they presented the bride to her husband, and the ceremony was closed.

The state of an Indian woman is deplorable. The day of her nuptials is the last that a female of Oronoko has not to lament the unhappy state of her sex. Domestic labours of every kind form her task, and no exemption from them can be obtained. All the toil of culture and harvest are performed by her. She stands exposed to the heat of a scorching sun, to the torrents which rush from the sky, and even when exhausted by fatigue, her barbarous husband supinely reclines in his hammock, smokes his segar, and regales himself with spirituous liquors, without addressing a single word to his companion. She prepares his meals, stands silently by him till he has finished, and then feeds on the fragments he has left.

The *Otomacs* are the only Indians who permit women to join in their public diversions; and, with regard to domestic drudgery, they differ in no respect from the other tribes. These are the only Indians who do not admit of a plurality of wives. Among them every husband is confined to one wife; and, what is extraordinary, young men are always married to old women, and old men to girls: because, in their opinion, household affairs are better managed, when the inexperience of youth is placed under the direction and subjected to the prudence of old age.

The *funeral ceremonies* of the Indians are as various as the tribes. When a *Guarauno Indian* dies, his companions, having fastened a cord to the body, throw it into the Oronoko, and then tie the cord to a tree. On the following day they drag it out; and, it is said, that they find it a skeleton, perfectly clean and white, stripped of all its flesh, which has been devoured by the fish. They then disjoint the bones, lay them up curiously in a basket, and suspend them from the roof of the house.

The *Aroacas* inter their dead with much pomp,

burying their weapons with them. One particular is attended to by them: they do not suffer the earth to touch the body, but invest it in a thick covering of banana leaves.

The *Salives*, who inhabit the northern bank of the Oronoko, not far from its sources, place the coffin of a person who dies in the middle of the house where he had resided. Stakes painted with different colours, and resembling all the emblems of mourning, are made to form a circle round it. The widow sits beside it. Every visitant who arrives, weeps bitterly before he enters, and his woful cries are echoed from within. Soon after this, the party assume an air of gaiety, and begin to drink and dance. The transition is a very extraordinary one, from excessive grief to excessive joy, from apparently unfeigned tears, to peals of unaffected laughter. These people perform very singular dances to the sound of funereal instruments, which cannot be heard, by any one unaccustomed to them, without horror. When fatigued, they repose for some hours, after which they resume their singing, drinking, and dancing. At the end of about three days, the whole company march in procession to the river, into which they plunge the coffin and its contents, together with every thing that belonged to the deceased. After this, they wash themselves, and retire to their respective homes.

When the *Achagoas* bury their caciques or chiefs, they cover the place of interment with a coat of mortar; and, for some time afterwards, they every morning carefully fill up the chinks, occasioned by the dryness of the weather. The intention of this is to prevent the ants, which are in immense numbers, from devouring the body.

Tenth Day's Instruction.

TERRA FIRMA CONTINUED.

Paria and Cumana.

We will commence our survey of Terra Firma with the province of *Paria.* This formerly constituted a part of Spanish Guiana, but it is now subject to the government of Caraccas; and, with Cumana, it has the general appellation of *New Andalusia.* Columbus landed here, and found the country extremely fertile. It abounds in gums, drugs, medicinal plants, sugar, tobacco, and many valuable kinds of timber; but it does not, at present, contain any towns or settlements of importance.

Between this province and the island of Trinidad is a bay, called the *Gulf of Paria.* This, which has two principal openings to the sea, is one of the largest and most excellent harbours in the world. Its bottom is muddy, and its depth from eight to thirty fathoms. On the south-west it receives a considerable volume of water from different mouths of the Oronoko. In this gulf the tide rises and falls with a violence not to be conceived by those who are unacquainted with the great ebbings and flowings of the sea.

Cumana.

West of Paria is the government of *Cumana.* This is composed of two provinces, Cumana, properly so called, and Barcelona.

The capital of Cumana is a large town of the same name, situated at the foot of a hill destitute of verdure, and about a mile from the shore; and it is divided into two parts by the *Manzanares.* This river, however, is so shallow as to be navigable only by small

vessels; merchantmen usually anchor at the distance of about a league from the shore.

The port of Cumana is very extensive, and affords excellent anchorage for vessels of any burthen. The sea is here generally calm; and is disturbed by none of those hurricanes, which cause so much devastation in the West Indies. On approaching the town from the sea, no steeple nor dome attracts from afar the eye of the voyager: only a few trunks of tamarind, cocoa-nut, and date trees, are visible above the flat roofs of the houses. The surrounding plains, especially those along the coast, wear a melancholy, dusty, and arid appearance: but the eye is relieved from this by beholding the fresh and luxuriant vegetation which marks the windings of the river.

A more full and satisfactory account of Cumana and its vicinity will be found in the following

Description of Cumana and its Environs. From the Travels of ALEXANDER DE HUMBOLDT *and* AIME BONPLAND, *in the Equinoctial Regions of the New Continent.*

ABOUT the beginning of the year 1799, Baron de Humboldt obtained permission to visit and make scientific researches in the Spanish colonies of South America. Accompanied by his friend, M. Bonpland, he sailed from Spain in the beginning of June, and after a voyage of forty-one days, arrived off the coast of *Cumana.*

It was on the 16th of July, a little after break of day, that the voyagers reached a verdant and picturesque shore. The mountains of *New Andalusia,* half veiled by mists, bounded the horizon to the south. The city of *Cumana* and its castle appeared between groups of cocoa-nut trees. The vessel was anchored in a port opposite to the mouth of the Manzanares; and the eyes of the voyagers were fixed on the groups of of cocoa-nut trees that bordered this river, the trunks

of which, more than sixty feet in height, towered over the landscape. The plain was covered with tufts of cassias, capers, and those arborescent minosas, which, like the pine trees of Italy, extend their branches in the form of an umbrella. The pinnated, or winged leaves of the palms, were peculiarly conspicuous on the azure expanse of an unclouded sky. As the sun ascended, a dazzling light was spread through the air along the hills, and over the bosom of the ocean. The splendour of the day, the vivid colouring of the vegetable world, the forms of the plants, the varied plumage of the birds, every thing announced the grand aspect of nature in the equinoctial regions.

On their landing the excessive heat of the atmosphere was found to be augmented by the intense reflection of light, from a soil nearly destitute of vegetation. They were conducted to the town through the suburbs of the Indians: the streets of these suburbs were regular, and formed by houses that were quite new and of pleasing appearance. This part of Cumana had lately been rebuilt, in consequence of an earthquake by which the city had been laid waste about eighteen months before.

Baron de Humboldt remarked a great extent of limestone rocks in the neighbourhood of Cumana, some of which were covered with thick forests of a kind of columnar trees, divided into several branches of singular appearance, and in the form of candelabras. These were chiefly a kind of cactus, or Indian fig trees, from thirty to forty feet high, and upwards of four feet in the circumference of the stems.

The town of Cumana, at this time, occupied a considerable space of ground, but it contained no remarkable buildings; for earthquakes had occurred so frequently, that the inhabitants were deterred from erecting expensive edifices of any description. The whole population of the town and suburbs, was estimated at about twenty thousand persons. In the suburbs, which

were very extensive, there were some fine tamarind trees; and the shore, near the mouth of the river, was bordered with mangroves.

The soil of the plain on which the city was built, appeared nearly destitute of vegetation. This arid plain, after heavy showers, exhibited an extraordinary phenomenon. The earth, drenched with rain, and again heated by the rays of the sun, emitted a strong musky odour, similar to that, which, under the torrid zone, is common to many kinds of animals, particularly animals of the cat kind; to crocodiles, vipers, and rattlesnakes. The smell was perceptible in proportion as the mould, containing the spoils of an innumerable quantity of reptiles, worms, and insects, was impregnated with water. Wherever the soil was turned up, says Baron de Humboldt, he was surprised with the mass of organic substances, in a decomposed state, which by turns were developed.

Near the river the Baron found a delightful grove shaded by tamarind trees, silk-cotton trees, and others, remarkable for their leaves and flowers. The soil of the adjacent ground was rich in pasturage. Dairy-houses, built with reeds, were separated from each other by clumps of trees; and, hot as the climate was, milk could here be kept fresh for a considerable time in porous earthen vessels. From a prejudice common in northern countries, Baron de Humboldt had been led to believe that cows under the torrid zone, did not yield rich milk; but his residence in this part of America, where he saw vast plains covered with grasses and herbaceous sensitive plants, convinced him that the cattle, and other ruminating animals of Europe, may become perfectly habituated even to the most scorching climates, provided they be supplied with water and nutritive food. The milk was excellent, and the butter much better than in many parts of Europe.

The banks of the *Manzanares* were overshadowed by numerous kinds of trees; and this beautiful and limpid stream was of inestimable benefit to the inha-

bitants of Cumana. All these, even women of the most opulent families, were able to swim. In a respectable society, with which Baron de Humboldt associated during his residence at Cumana, it was customary, in moonlight nights, to have chairs placed in the water. The men and women, all lightly clothed, assembled in the river, and often passed several successive hours there; the men amusing themselves with smoking, and the whole company in conversation.

Earthquakes are very frequent in Cumana, and the Baron, during his residence there, felt several violent shocks. He says, that somewhat more than thirty years before he was there, the place was entirely destroyed by an earthquake: the whole of the houses were overturned in the space of a few minutes; and the shocks were repeated several times a day, for nearly fourteen months afterwards. During all this time the inhabitants lived in tents in the streets; and when the earthquakes did not take place more than once a month, they began to rebuild their houses. Another remarkable earthquake occurred in December, 1797. The shock was attended by a loud subterraneous noise; and more than four-fifths of the city were destroyed. Happily the most violent shock was preceded by a slight undulating motion, which alarmed the inhabitants, and gave most of them time to escape into the streets; and, consequently, a small number only perished. Half an hour before the catastrophe, a strong smell of sulphur was perceived near a hill at a little distance, and, at the same time, a sudden flame burst from a place upon the bank of the river.

The first weeks of the abode of the travellers at Cumana, were employed in examining and setting in order their philosophical instruments, in botanizing in the neighbouring fields; and in examining the traces of the earthquake in 1797. Overpowered at once by a great number of objects, they were at first embarrassed as to the manner in which they should lay down a regular plan of study and observation. Every thing

around inspired them with a lively interest. The house in which they resided was situated in the great square of Cumana. Part of it was surrounded with arcades, over which extended a long wooden gallery. This was the place where *slaves*, brought from the coast of Africa, were sold. Here Baron de Humboldt was sometimes an involuntary witness of afflicting scenes. Shortly after his arrival a Danish slave ship arrived in the harbour, and a great number of young negroes, from fifteen to twenty years of age, were daily exposed to sale. Every morning cocoa-nut oil was distributed among them, and with this they rubbed their bodies, to give their skin a black polish. The persons who came to purchase examined the teeth of these slaves, to judge of their age, in the same manner as horse dealers do those of horses in a market.

The first excursion which the travellers made from Cumana was toward the peninsula of *Araya*, and those countries which were formerly celebrated for the slave trade and pearl-fishery. They embarked about two o'clock in the morning of the nineteenth of August, on the river Manzanares. The principal objects of this excursion were to see the ruins of the castle of Araya, to examine the salt-works there, and to make some observations on the mountains. The night was delightfully cool; swarms of luminous insects glittered in the air, and upon the banks of the river. On approaching one of the plantations, their attention was excited by some bonfires which had been kindled by the negroes. It was Sunday, and the slaves had been amusing themselves by dancing all night to the music of a guitar. Although the travellers had yet been scarcely two months under the torrid zone, they had already become so sensible to the variation of slightest temperature, that the cold prevented them from sleeping.

They landed about eight o'clock in the morning, at the point of *Araya*, near the new salt-works. A solitary house stood in a plain destitute of vegetation, near a battery of three guns, the only defence of this part of

the coast. The inspector of the salt-works passed the chief part of his life in a hammock, whence he issued his orders to the workmen. These works formerly excited the jealousy of the English, Dutch, and other maritime powers, from the great supply of salt which they were capable of affording to distant colonies and countries; but at this time very little salt was made here. The place was chiefly worthy of observation on account of the nature of the soil which contained the salt marshes: there was a large mere or pool, from the bottom of which, in dry seasons, masses of pure crystallized salt, three or four feet in thickness, were sometimes taken.

From the salt-works the travellers walked some miles to sleep at an Indian hut, near the ruins of the castle of Araya; and in their way they traversed a clayey plain, stripped of vegetation, and two chains of hills. A hill on which the castle stood was crowned with American aloes, Indian fig-trees, and thorny mimosas; and had at the foot a deep and gloomy forest. On the ensuing day they passed through an Indian village, in which they observed some potteries, that were entirely managed by females. These were unacquainted with the use both of the potter's wheel and of ovens; yet they were able, with great address, to form vessels of two or three feet in diameter, and, by placing around them the slender branches of trees, and setting these on fire, they contrived to bake them in the open air.

Baron de Humboldt remarks, that the seas of this neighbourhood abound in shoals, on which are found great numbers of pearl oysters: that anciently pearls of large size and excellent quality were obtained here; but that the pearl-fishery had diminished rapidly toward the end of the sixteenth century, and had entirely ceased before the year 1683. When he was at Cumana, although the pearl oysters had again become numerous, he says that the pearls found in them were in general of small size and of very inferior value; a fact for which he was wholly unable to account. At present

Spanish America furnishes no other pearls for trade than those of the *Gulf of Panama*, and the mouth of the *Rio de la Hacha*.

Early on the fourth of November Baron de Humboldt and his friend commenced a journey from Cumana to the district of the Chayma Indians, and the group of lofty mountains that traverses New Andalusia. Their instruments and provisions were carried by two beasts of burthen. The morning was deliciously cool. The road, or rather path that led to *Cumanacoa*, followed the right bank of the *Manzanares*. They passed a hospital of Capuchins, situated in a small wood of lignum vitæ and caper trees; and thence proceeded, for two leagues, over a soil destitute of trees, but containing many kinds of succulent plants. After having walked for two hours they arrived at the high chain of the interior mountains. Here every object assumed a more majestic and picturesque character than before. The vegetation was wholly different from that of the plains. The soil, watered by springs, was furrowed in every direction. Trees of gigantic loftiness rose from the ravines; and their bark, black and scorched, formed a contrast with the fresh verdure of the vegetation beneath. As the travellers advanced, the forms and grouping of the rocks reminded them of the scenes of Switzerland and the Tyrol. In these American Alps numerous interesting kinds of tropical plants flourished in great luxuriance.

They traversed the forest of these mountains by a narrow path; and proceeded along a rivulet which rolled foaming over a bed of rocks. In the most fertile parts of the valleys they found Indian huts, that had been erected in the centre of enclosures, containing plantains, pawpaw trees, sugar-canes, and Indian corn. These cultivated spots were generally of small extent; and would have excited much surprise had the travellers not recollected that an acre of ground, in which plantains, cassava, yams, and maize, are cultivated, will produce

nearly twenty times as much food as the same space sown with corn.

As they penetrated the forest, the land became progressively more elevated. The trunks of the trees presented here an extraordinary phenomenon; a graminous plant climbs up them to the height of eight or ten feet, and forms festoons which cross the path, and swing about with the wind. They halted about three o'clock in the afternoon, on a small flat, at a considerable elevation above the level of the sea. From the top of a hill, which overlooked this spot, they had a magnificent view of the surrounding country. An immense forest extended from their feet nearly to the edge of the ocean. The tops of the trees, interwoven with lianas, and crowned with long wreaths of flowers, formed a vast carpet of verdure, the dark tint of which augmented the splendour of the aerial light. The aspect of this spot was the more interesting as they then, for the first time, beheld those vast masses of tropical vegetation, that are wholly different from any that are produced in temperate climates.

As the travellers advanced toward the south-west, the soil became dry and sandy. They climbed a group of mountains which separated the coast from the vast plains of Savannahs, that are bordered by the river *Oronoko*, and passed the night in a house where there was a military post of eight men, under the command of a Spanish serjeant. Several parts of the vast forests which surrounded the mountains were on fire; and reddish flames, half enveloped in clouds of smoke, presented a most awful spectacle. Baron de Humboldt remarks, that it is not unusual with the inhabitants of these countries to set fire to the forests, for the purpose of improving the pasturage beneath the trees. Enormous conflagrations also are often occasioned by the carelessness of the Indians, in neglecting, when they travel, to extinguish the fires with which they dress their food.

They left this place on the fifth of September, before

sun-rise. The descent from the mountains was very dangerous, the path being in many places not more than fifteen inches broad, and bordered by precipices. On issuing from a ravine at the bottom, they entered a thick forest, traversed by a great number of small rivers which were easily forded.

When a traveller, newly arrived from Europe, penetrates, for the first time, the forests of South America, says Baron de Humboldt, nature presents herself to him under an unexpected aspect. The objects that surround him recall but feebly those pictures which celebrated writers have traced on the banks of the Mississippi, in Florida, and in other temperate regions of the new world. He feels, at every step, that he is not on the confines, but in the centre of the torrid zone: not in one of the West India islands, but on a vast continent, where every thing is gigantic, the mountains, the rivers, and the mass of vegetation. If he feel strongly the beauty of picturesque scenery, he can scarcely define the various emotions which crowd upon his mind. He can scarcely distinguish what most excites his admiration;—the deep silence of those solitudes, the individual beauty and contrast of forms, or that vigour and freshness of vegetable life, which characterize the climate of the tropics. It might seem as if the earth, overloaded with plants, did not allow them space enough to unfold themselves. The trunks of the trees are every where concealed under a thick carpet of verdure; and numerous plants are nourished upon their stems. The same lianas which creep upon the ground, reach the tops of the trees, and pass from one to another at the height of more than a hundred feet. Thus, by a continual interlacing of parasitic plants, or such as take root and grow upon the trees, the botanist is often led to confound the flowers, the fruits, and leaves, which belong to different species.

The travellers walked for some hours under the shade of these arcades, which scarcely admitted a glimpse of the sky. A great fern tree rose above

masses of scattered rocks. In this place they were delighted at seeing, for the first time, those nests in the shape of bottles, or small pockets, which are suspended to the branches of the trees, and which attest the admirable industry of the Orioles and other small birds. The former, so well known for their vivid colours, were seen only in pairs, while the parrots were observed in flocks of several hundreds. None but persons who have visited the torrid climates can imagine how effectually these birds sometimes drown with their voice, the noise of the torrents which rush down from the rocks.

At the distance of somewhat more than a league from the village of San Fernando, the travellers left the forests, and pursued a narrow path, which, after many windings, led into an open, but extremely humid country. Here they found many curious kinds of aquatic plants, some of which were from eight to ten feet in height. Near this village, the evaporation, caused by the action of the sun, was so great, that, being very lightly clothed, they felt themselves as wet as if they had been in a vapour bath. The road was bordered with a kind of bamboo, that were more than forty feet in height. Nothing could exceed the elegance of these singular plants. The form and disposition of their leaves gave to them a character of lightness, which formed an agreeable contrast with their height. Their smooth and glossy stems were generally bent towards the banks of rivulets and waved with the slightest breath of air.

San Fernando is a small village, situated in a narrow plain, and surrounded by steep calcareous rocks. This place is called the mission of the *Cheyma Indians;* in explanation of which it is to be observed that, in the Spanish colonies, a certain number of habitations collected round a church, in which a monk performs the ministerial duties, is called a mission. The houses, or rather the huts, of the Indians of this mission, were separated from each other, but were not surrounded with

gardens. The streets were wide, straight, and crossed each other at right angles. There was great uniformity in the construction of the houses, and extreme neatness in them all. Every Indian family, besides his own garden, cultivated, at some distance from the village, a garden belonging to the community. This is sometimes a sugar or indigo plantation, and its produce is applied for the support of the church, and in purchase of the sacerdotal ornaments.

A square in the centre of the village of San Fernando contained the church, the dwelling of the missionary, and an humble edifice, which had the pompous appellation of "The King's house." This description of buildings are to be found in all the Spanish colonies, and are destined, like the Caravanseras of the east, for the lodgings of travellers; and Baron de Humboldt and his friend, in many instances after this, found them extremely convenient places of accommodation, in a country where even the name of an inn is unknown.

Leaving San Fernando they proceeded towards the Indian villages of *Arenas* and *Cumanacoa*. In a valley near the latter, great quantities of tobacco were cultivated. Baron de Humboldt remarks, that all the tobacco which is gathered in these colonies does not belong to the individuals who cultivate it, but that they are compelled to sell it to the government; and that guards are employed to go over the country and destroy any plantations of tobacco, which are not within the districts allowed for its culture.

Not far from Cumanacoa the travellers saw a vast crevice, more than three hundred yards wide, and surrounded by perpendicular rocks. It appeared like an immense mine opened by the falling in of the earth; and had probably been the effect of an earthquake. It was filled with trees, the interwoven branches of which seemed to have no room to spread: a torrent traversed the bottom; and its whole appearance was highly picturesque. This crevice was inhabited by jaguar tigers, some of which were of enormous size. From two ca-

verns within it, flames of fire occasionally issued, and had been observed at a great distance in the night. The adjacent mountains had been illuminated by them; and, judging by the elevation of the rocks above which these fiery exhalations had been known to ascend, Baron de Humboldt was of opinion that they sometimes rose to the height of several hundred feet. This phenomenon was chiefly observed during the rainy season.

The baron and his friend attempted to penetrate into the crevice, for the purpose of ascertaining, if possible, the cause of these extraordinary conflagrations; but the strength of the vegetation, and the interweaving of the lianas and thorny plants, completely prevented their progress. The inhabitants of the valley, however, felt an interest in the researches of the travellers; not indeed with the same view, but under a notion that the crevice contained a gold mine. In consequence of this, with the aid of their slaves, they opened a path across the woods to a cataract of the torrent which ran along the bottom. On entering the crevice, the travellers observed the footsteps of jaguars, and the remains of a porcupine which had been eaten by one of them. They traversed a slope of the rocks which overhung the water, and in one place passed along the verge of precipices nearly three hundred feet in depth. In other places they had to descend and cross the stream. Their progress was excessively fatiguing, for every footstep was impeded by the irregularity of the ground, and by the massive vegetation through which they had to force their way. The baron and his friend loaded themselves with new and extraordinary plants; and the slaves, by incisions with their knives in the trunks of the trees, exhibited to their view many beautiful kinds of wood which would be extremely valuable to turners and cabinet-makers in Europe.

On their arrival at the bottom, the imaginary gold mine was shown to the travellers. It was nothing more than an excavation cut into a black stratum of marl, which contained a great quantity of pyrites, or

iron mineralized by sulphur. The torrent that passed through the stratum in which this substance was found, washed along with it many of the metallic grains, and the inhabitants of the country had been deceived in imagining that these were gold.

The party followed the direction of the crevice; and at length, excessively fatigued from the obstacles which had opposed their progress, and wet to the skin by frequently crossing the torrent, they arrived at the extremity. Here a wall of limestone rock, seventeen hundred yards in height, and presenting naked strata in a perpendicular section, terminated their excursion. About the middle of this precipice, and in a place inaccessible to man, were two caverns. These were the places from which the flames had been seen to issue. They were now inhabited by nocturnal birds; and near them the travellers observed some specimens of perfectly transparent crystals, enchased in the masses of limestone. They reposed themselves for awhile at the foot of the rock, and were compelled to return without having made any discovery whatever which could lead to a satisfactory explanation of the cause of the flames.

On the 12th of September they continued their journey to the convent of Caripe, the principal village of the Chayma missions. After having passed through an Indian village, they ascended the mountains beyond it. They at length reached an elevation two thousand feet above the level of the sea, and passed over an immense plain covered with gramineous plants. Mimosas with hemispheric tops, and stems only four or five feet high, their branches bent toward the ground, or spread out like umbrellas, alone interrupted the dull uniformity of the scene.

At a solitary farm house, on a small plain, considerably more elevated than this, the travellers rested three days, and were received and treated by the proprietor with great kindness. Here they found milk, excellent meat, and, above all, a delightful climate. From this

elevated point they were able to perceive, as far as the eye could reach, only naked savannahs or plains. But, notwithstanding the apparent uniformity of the vegetation, they found a great number of curious and highly interesting plants. In this solitary place, however, they were chiefly delighted by the beauty and serenity of the nights; and by a freshness in the air after sun-set like that of an European spring. Nothing, says Baron de Humboldt, could be compared with the impression of majestic tranquillity, which the aspect of the firmament, in this solitary region, inspired. The proprietor of the farm prolonged his evenings with them; and the tree under which they sat, the luminous insects which flitted in the air, the constellations which shone toward the south; every object seemed to inform the travellers that they were far from their native home.

From this farm they proceeded to the mission of *San Antonio*. It was situated in a valley, and was famous on account of a small church with two towers, built of brick, in a tolerably good style of architecture, and ornamented with columns of the Doric order, the wonder of the country. The mouldings of the capitals, the cornices, and other ornaments, had been executed in clay mixed with pounded brick. Beyond San Antonio the travellers forded two rivers, and, having passed another mission, they soon afterwards arrived at the convent of Caripe. In the course of their journey they had seen many extraordinary trees and plants; and on some of the lowest branches of the trees they had remarked a great number of small bags of silk, of beautiful lustre: these were the produce of a kind of silkworms which did not appear to be very uncommon.

At *Caripe* the travellers stopped near a wooden cross, in the midst of a square. It was surrounded with benches, on which several monks were seated. The convent was backed by an enormous wall of perpendicular rocks, thickly covered with verdure. It is difficult, says Baron de Humboldt, to imagine a situation more picturesque and beautiful than this.

There was in this convent a very numerous society, consisting chiefly of young monks, recently arrived from Spain, to be settled in the missions; and of old and infirm missionaries, who had sought for health in the fresh and salubrious atmosphere of Caripe. On the subject of the missionaries Baron de Humboldt remarks, that not only at Caripe, but in all other parts of America which he visited, they seemed invariably to treat the Indians with kindness.

During their residence at Caripe, the travellers were conducted by several of the monks, and by a party of Indians, to visit a celebrated cavern, called the *Cave of Guacharo*, situated about three leagues south-west from the convent. It was on the side of a limestone mountain. Its entrance formed a vault eighty feet broad and seventy-two feet high; and the rock that surmounted it was covered with trees of gigantic height. The greatest luxuriancy of vegetation embellished not only the exterior of the cavern, but the inside of its entrance. A torrent ran along the bottom.

The party entered, and measured their way by a cord. After they had proceeded about one hundred and fifty yards, it was necessary to light the torches they had brought with them. At the place where the light began to fail, Baron de Humboldt heard from afar the hoarse sounds of nocturnal birds. One species of these were as large as European fowls; they had wide mouths, and had some analogy both to goatsuckers and crows. Their wings were so long as to extend three feet and a half in width. It is difficult, says this gentleman, to form an idea of the horrible noise occasioned by the screaming, or croaking, of thousands of these birds in the dark interior parts of the cavern. The noise increased as the travellers advanced, and until the birds were alarmed at the light of the torches. It then ceased for a little while, and they heard, at a distance, the plaintive cries of birds that were at roost in other more distant recesses of the cavern.

Baron de Humboldt says, that it is customary

with the Indians of the adjacent country, every year about midsummer, to enter this cavern armed with poles; and that on these occasions they kill many thousands of the birds, and take from the inside of each a great quantity of fat. This is a substance half liquid, transparent, without smell, and so pure, that it may be kept more than a year without becoming rancid. At the convent of Caripe no other oil was used in the kitchen of the monks than that obtained from the Guacharo birds. M. Bonpland succeeded in killing one of them; and, on examination, found it to be a species of the feathered tribe which had before been unknown.

The travellers followed the course of the torrent, which appeared to be about thirty feet wide; and, after awhile, came to a part of the cave beyond which the Indians objected to proceed, as they believed that the interior recesses of the cavern were inhabited by the souls of their ancestors. With some difficulty, however, they were induced to go on. They soon afterwards arrived at a spot where the bottom of the cavern was considerably elevated, and where the river formed a small cascade. With some difficulty they climbed along the side of the water. From this place the grotto was perceptibly contracted in its dimensions. They now walked, through thick mud, to a spot where they beheld with astonishment the progress of subterraneous vegetation. The seeds which the guacharoes had carried into the grotto to feed their young ones, had sprung up in great abundance; and a singular kind of crop, with blanched stalks and half formed leaves, had risen, in the midst of the darkness, to the height of two feet and upward. The Indians examined them in silent horror. It might have been thought that these subterraneous vegetables, pale and disfigured, appeared to them phantoms banished from the face of the earth. The missionaries, with all their authority, could not prevail with them to penetrate further into the cavern; and the travellers, compelled to yield to the pusilla-

nimity of their guides, had now no alternative but to trace back their steps.

When they reached the entrance, they found that the missionaries had prepared a comfortable repast to refresh them after the fatigues they had undergone. Baron de Humboldt made many inquiries respecting this extraordinary cavern; and particularly whether any fossil, or mineralized remains of animals, had been found in it; but he could not obtain any satisfactory information whatever concerning it.

The days, which the travellers passed at Caripe, glided swiftly away. From sunrise to nightfall they were generally occupied in traversing the forests and neighbouring mountains to collect plants; and they had never made a more considerable harvest. The rainy season, however, had set in; but when the state of the weather prevented them from undertaking distant excursions, they visited the huts of the Indians, or otherwise occupied themselves in the village, or its immediate neighbourhood. After having passed almost the whole day in the open air, they employed their evenings at the convent, in making notes, drying their plants, or in drawing those which appeared to be of new species. The monks left them to enjoy their full liberty; and they long afterwards recollected with delight, an abode which had, at the same time, been agreeable to them and advantageous to their researches.

On the 22d of September they left Caripe, accompanied by four mules, laden with instruments and plants, and descended the north-east slope of the calcareous Alps of New Andalusia. This descent was attended with considerable difficulty. In the steepest parts the mules drew their hind-legs near their fore-legs, and lowering their crupper, slided quietly down. The rider suffered no risk, provided he loosened the bridle of his mule, and left the animal perfectly free in his movements. This tremendous descent continued for seven hours. In many places it extended along a series of irregular

steps, some of them two or three feet deep, formed in deep ravines, by the torrents of the rainy seasons. In one part of it the travellers passed through a thick forest. The trees were of stupendous height and size; and, under their bushy and deep green foliage, there was a kind of half daylight, a sort of obscurity, of which the forests of Europe afford no example. The atmosphere was surcharged with moisture; and a strongly aromatic odour was emitted from the flowers, the fruit, and even the wood of several of the trees. Many new and interesting species were observed by the travellers in the course of this journey. They likewise saw many beautiful kinds of butterflies of large size, which flew at a prodigious height in the air.

The weather became cloudy, the thunder rolled at a distance; and the plaintive howling of monkeys in the woods, denoted the proximity of a storm. The travellers now, for the first time, saw near them many of those large monkeys which are called by the French naturalists alouates, and by the English howling monkeys. These, to the number of thirty or forty, amused them by passing in a line from one tree to another, upon the horizontal and intersecting branches. While their attention was fixed upon this extraordinary sight, they observed a troop of Indians, who were proceeding toward the mountains of Caripe. Like nearly all the natives of this part of America, they were quite naked. The men and boys went first, all armed with bows and arrows; and the women, laden with heavy burthens, closed the rear.

Beyond the forest the travellers passed an extensive savanna: from one side of this they had a view along a valley, the bottom of which was covered with a thick forest. The eye looked down upon the tops of the trees, which, at the depth of eight hundred feet below the road, formed a carpet of verdure of dark and uniform tint. They passed through an Indian mission village, called *Santa Cruz*, and proceeded thence over a partly wooded and partly mountainous country, to

Cariaco, a town situated in the midst of a vast plain, filled with plantations, huts, and scattered groups of cocoa-nut-trees. To the west of the town extends the *Gulf of Cariaco*.

The whole country around Cariaco, in consequence of the moisture arising from the heat of the climate, the extreme richness of the soil, the luxuriancy of the vegetation, and the frequent and long continued rains which are there prevalent, is considered to be very prejudicial to the health of Europeans. When the travellers were here, a great number of the inhabitants were confined to their hammocks or beds, by intermittent fevers. The whole population consisted of somewhat more than six thousand souls. Coffee, sugar, and cotton, are the chief articles produced in the vicinity of this place. The culture of the cacao, or chocolate tree, was formerly much attended to here; but of late the number of these trees has greatly diminished. So great is the fertility of the soil that, in some places, the maize yields two crops in the year, and produces three hundred and eighty times the quantity sown.

The travellers having been prevented, by the intermittent fever, from prolonging their stay in Cariaco, embarked for Cumana, on board a vessel which was about to cross the gulf of Cariaco. They had scarcely entered the gulf when they had to struggle with contrary winds. The rain descended in torrents, and the thunder rolled very near. Swarms of flamingoes, egrets, and cormorants, filled the air, seeking the shore. The alcatras, a large species of pelican, alone continued peaceably to fish in the middle of the gulf. The vessel passed over a part of the gulf where hot springs gush up from the bottom. It was the time of flood, so that the difference of temperature was less perceptible than it otherwise would have been. But Baron de Humboldt was assured that the existence of these hot springs raised the temperature of the sea through a considerable space. In consequence of the contrary winds they were obliged to take shelter at a small farm on the south

side of the gulf. The whole of the coast around this farm was covered with a beautiful vegetation. Cocoa-nut-trees were here very abundant; and indeed through all this part of America, they are a source of considerable profit to the proprietors; for each tree, when in full bearing, is said to yield an annual profit equal to about twelve shillings sterling.

On the ensuing day the travellers once more reached *Cumana.*

Eleventh Day's Instruction.

TERRA FIRMA CONTINUED.

Narrative of the Journey of MESSRS. HUMBOLDT *and* BONPLAND *from Cumana to Caraccas.*

BARON DE HUMBOLDT and his friend now remained at Cumana several weeks, in order to make preparations for a long inland journey, and a voyage on the rivers Oronoko and Negro. They got in readiness their provisions, packed up such astronomical instruments as could most easily be transported in boats, and furnished themselves with guides.

The heat of the nights, during part of the time they were here, seemed stifling; and the atmosphere in the daytime appeared as if it were on fire. The ground, parched and dusty, was cracked on every side. On the 4th of November, about four o'clock in the afternoon, thunder was heard at an immense height in the air, without rolling, and with a hoarse and often interrupted sound. Shortly afterwards two shocks of an earthquake were felt, at the distance of fifteen seconds from each other. The people in the streets filled the air with their cries. A few minutes before

the first shock there was a violent blast of wind, followed by rain in great drops. About nine in the evening a third shock occurred, slighter than the former, but evidently attended with a subterraneous noise. The inhabitants consider red vapours which occasionally darken the horizon, and the failure of the breezes during the night, as prognostics infallibly disastrous. This earthquake made a very lively impression upon Baron de Humboldt; for he did not then imagine that, a few months afterwards, in a long abode which he made in Quito and near the coasts of Peru, he should become nearly as familiar with abrupt movements of the ground, as in Europe we are with the noise of thunder.

The night of the 11th of November was cool and extremely beautiful. Toward the morning, from half after two, the most extraordinary luminous meteors imaginable were seen towards the east. M. Bonpland, who had risen, and was in the gallery of the house where he lodged, enjoying the freshness of the air, perceived them first. Thousands of bolides and falling stars succeeded each other during four hours. Their direction was regularly from north to south. He relates that, from the beginning of the phenomenon, there was not a space in the firmament equal in extent to three diameters of the moon, which was not, at every instant, filled with them. Their sizes were various, and all of them left luminous traces of considerable length, which lasted seven or eight seconds. The inhabitants of Cumana were considerably alarmed by these appearances; for many of them recollected that the great earthquakes of 1766 were preceded by similar phenomena. The abovementioned meteors were not only observed in some parts of America far distant from Cumana, but also in Europe.

Five days after this, at eight in the evening, Baron de Humboldt and his friend sailed from Cumana in a westerly direction for Guayra, a port of Caraccas, distant about sixty leagues. It was the intention of the travellers to

reside in the town of Caraccas, till the end of the rainy season: and after that to direct their course thence to the missions of the Oronoko: to go up that immense river, to the south of the cataracts, as far as Rio Negro, and the frontiers of Brazil; and thence to return to Cumana, by the capital of Spanish Guiana. This, it was considered, would be a journey of at least seven hundred leagues; and he was the more desirous of accomplishing it, as hitherto the only parts of the Oronoko, known to Europeans, were those near its mouth.

In their course they anchored in the port of *Barcelona*, at the mouth of the river *Neveri*. This place, the name of which is scarcely to be found in our maps, has had a very active commerce since the year 1795. It has a fort erected for the protection of vessels, but it has no immediately adjacent high lands to shelter them from the winds. From Barcelona a great part of the produce of the adjacent district is exported. These consist of salted provisions; of oxen, mules, and horses, the principal demand for which is from the West India islands. The situation of Barcelona is peculiarly advantageous for a trade in cattle. These are principally bred on a range of fertile plains, distant about three days journey in the interior of the country; and cattle are nearly as numerous here as they are in the vicinity of Buenos Ayres. In the years of 1799 and 1800 about eight thousand mules were exported from Barcelona for the different islands.

[The city of Barcelona was founded in the year 1634. Its unpaved streets are extremely muddy in wet weather, and in dry seasons are covered with a dust so light that the least breath raises it in the air. The immense number of hogs that were formerly fed in this city caused very nauseous and unwholesome smells through every part of it. The houses are neither handsomely nor agreeably constructed. There are here very few slaves, and the population of the place consists of about half whites and half people of colour.]

The travellers sailed from Barcelona, and landed at

the port of *Guayra*, intending to proceed thence to Caraccas. The situation of Guayra is singular. The houses of the town are backed by a wall of steep rocks, which leave not more than two hundred or two hundred and twenty yards of flat ground between them and the ocean. It has two streets, which run parallel to each other, east and west. The aspect of this place has something solitary and gloomy. On landing at Guayra the voyager seems not to be on a continent covered with vast forests, but in a rocky island, almost destitute of mould and vegetation. During the daytime, and often also in the night, the heat is suffocating. Few parts of the American coast have so burning a climate as this. [The town has no apparent opening except towards the sea. This explains the cause of the great heats that are prevalent. And the place is so unhealthy, that, in the months of July, August, and September, the inhabitants always suffer from the prevalence of putrid and malignant fevers. The streets are narrow and badly paved, and the houses are meanly built. It is, in short, a wretched place, which contains nothing regular, nor curious, except the batteries that defend it. The port is a bad and inconvenient one, consequently very few merchants reside here. The principal business is done at Caraccas, all commodities being purchased as well as sold there, and only sent to Guayra to be embarked.]

The passage from Guayra to Caraccas, is extremely mountainous; and the views from it are highly romantic. The distance is not more than five leagues; and the road itself is kept in excellent repair. [In one part of it there is an inn, which is estimated to be about three thousand six hundred feet above the level of the sea.]

The travellers arrived at *Caraccas* in the evening of the 21st of November. This is the capital of a country nearly twice as large as Peru, and is the seat of an "audienca," or high court of justice, and one of the eight archbishoprics into which Spanish America is di-

vided. In the year 1800 its population amounted to about forty-five thousand inhabitants, of which eighteen thousand were whites, and twenty-seven thousand free persons of colour. But in the great earthquake of the 26th of March, 1812, twelve thousand of the inhabitants are said to have been buried beneath the ruins of their houses; and the political contests which succeeded this catastrophe, have reduced the number to less than twenty thousand.

The city is seated in a valley at the entrance of an elevated plain, three leagues in length, and two leagues and a half in width, watered by the river Guayra. The ground on which it stands is uneven, and has a steep declivity towards the south-east. Three small streams, the banks of which are very high, cross the place from north to south. Caraccas, when the travellers were here, contained eight churches, five convents, and a theatre, which held from fifteen to eighteen hundred persons. The pit of the theatre was open at the top, so that the spectators could at the same time see the actors and the stars. The streets were wide, straight, and crossed each other at right angles. The houses were spacious, and higher than they ought to have been in a country subject to violent commotions of the earth. Before the earthquake in 1812, there were two squares, Alta Garcia, and St. Francis; but that earthquake destroyed almost the whole city. The part of it in which Baron de Humboldt had resided was overturned as if a mine had been sprung beneath it.

From the narrowness of the valley in which it is situated, and the rudeness of the adjacent high mountains, Caraccas has a somewhat gloomy appearance, particularly in the months of November and December, when the coolest temperature prevails; for during these months it is often enveloped in clouds and mist. The nights of June and July, however, are delicious: this is the season for enjoying, in Caraccas, all the beauty of landscape. The climate of this place has

often been called a perpetual spring, and it is equally favourable to the growth of the plantain, the orange, and coffee-trees; and to the production of apples, apricots, and corn. It is however to be regretted that such a climate should be inconstant and variable. The inhabitants assert, that they frequently have several seasons in the same day. Rain falls very abundantly in the months of April, May, and June.

In the vicinity of Caraccas, the sugar-cane is cultivated with success; but, on account of the general dryness of the climate, and the stony nature of the soil, the culture of the coffee-tree is preferred. When the latter is in blossom, a considerable part of the plain adjacent to the town, presents a delightful aspect. An European traveller, who, for the first time, ascends the valley of Caraccas, is agreeably surprised to find here the culinary plants of his own climate growing by the side of the coffee and banana trees.

Baron de Humboldt and his friend resided two months at Caraccas. It was a season of drought; and, for the purpose of improving the pasturage, the savannas, and the turf that covered the steepest rocks, were set on fire. The vast conflagrations, viewed from a distance, produced the most singular effects of light imaginable. In the dark nights, the inflamed land appeared like currents of lava suspended over the valley. Sometimes the flames assumed a reddish tint: at other times they had the appearance of luminous bands enveloped in thick clouds; and, as these clouds ascended, their edges reflected a splendid light.

In no part of Spanish America has civilization assumed a more European aspect than in this. Society does not indeed present very animated and varied pleasures, but that feeling of comfort is experienced in domestic life, which leads to cheerfulness and cordiality, united with considerable politeness of manners. There exist at Caraccas two races of men; one of which preserves a strong attachment for ancient customs, simplicity of manners, and moderation in their

desires: to these America appears in the light of a property conquered by their ancestors: they abhor what is called the enlightened state of the age, and carefully preserve hereditary privileges as a part of their patrimony. The other class, less occupied even by the present than the future, have a propensity, often ill judged, for new habits and new ideas. Baron de Humboldt found, in several families at Caraccas, a taste for instruction, a knowledge of the master-pieces of French and Italian literature, and a particular predilection for music. There was not, however, any printing-office in the place earlier than the year 1806.

While the baron was resident at Caraccas, he and his friend ascended, though not without fatigue and difficulty, to the summit of the lofty mountain of *Silla*, which overlooks the place, and the height of which they ascertained to be more than eight thousand six hundred feet above the level of the sea.

In various excursions which they made among the mountains they were attentive to the indications of metals and ores. In several parts of the valley of Caraccas they found small quantities of gold, disseminated in veins of a kind of rock called quartz: they also found some ores of silver, copper, and lead; but they were doubtful whether these indications of metalliferous substances were not too poor to deserve much attention from the miner. Attempts indeed had been made, about the middle of the sixteenth century, to search for gold, but they were not apparently attended with much success. The greater part of the gold procured in this part of America, was found among the mountains of New Granada.

To this account I shall add some notes from M. Depon's travels in South America, descriptive of the state of Caraccas, previously to the earthquake in 1812, and shall afterwards relate the particulars of that dreadful catastrophe.

The ground, occupied by the town of Caraccas, is about two thousand paces square; and is so irregular

that there are few parts in which the passenger is not obliged either to ascend or to descend. Previously to the earthquake, no place could be better supplied with water than this. The streams which passed through it were conducted to an infinity both of public and private fountains. The streets of Caraccas were about twenty feet wide and well paved. In the grand square, called Plaza Mayor, the market was held. Here vegetables, fruit, meat, salted provisions, fish, poultry, game, bread, parrots, monkeys, slaves, birds, and innumerable other things were sold. The cathedral was on the eastern side of the square, but its style of architecture was very bad. The houses were, in general, well built; and many of them were handsomely furnished. Those of the most wealthy inhabitants had beautiful and expensive looking-glasses. At the windows, and over the inside doors, were elegant curtains of crimson damask. The rooms had chairs and sofas of wood, the seats of which were covered with leather or damask, and adorned with gothic work, but overloaded with gilding. The principal sleeping rooms had bedsteads with deep head boards, richly gilded; furniture of damask, rich counterpanes, and down pillows, in fine muslin cases, trimmed with lace. The eye wandered also over tables with gilded legs, chests of drawers, on which the gilder had exhausted all the resources of his art; brilliant lustres, suspended in the principal apartments; cornices, which seemed as if they had been dipped in gold; and rich carpets, that covered all those parts of the rooms in which the seats of honour were placed.

Caraccas, at this time, possessed no other public edifices than such as were dedicated to religion, except the barracks for the troops that were quartered in the town. These were new, handsomely built, and situated on a spot which commanded a view of the whole place.

Religious festivals were so numerous at Caraccas, that there were few days in the year on which some saint, male or female, was not celebrated; and, on these occasions, after prayers in the churches, the day

generally closed with public amusements, such as fire-works, concerts, and balls. But the most brilliant act of each festival was the procession of the saint, who was to be celebrated. This always took place in the afternoon. A figure of the saint, as large as life, and richly habited, was carried on a handsomely decorated table, and either preceded or followed by some other saint of the same church, less sumptuously adorned. A number of flags and crosses opened the march. The men walked in two lines. Each of the principal persons carried in his hand a wax taper. Then came the music, the clergy, the civil authorities, and lastly, women, surrounded by a barrier of bayonets. The train was always very numerous. The frames of all the windows, in the streets through which the procession moved, were ornamented with hangings; and the windows themselves were adorned with women, who crowded to them from all parts of the city, to witness the exhibition.

The pomp of having numerous servants was here carried to a great extent. Every one who could afford it, had about his house four or five times as many domestic slaves as their work required. It is probable, observes M. Depons, that there was not in the whole of the West Indies, a place where there were so many freed persons, or descendants from freed persons, in proportion to the other classes, as in this. They here exercised various handicraft trades: almost every carpenter, joiner, cabinet-maker, mason, blacksmith, tailor, and shoe-maker, was a freed man. But they excelled in none of these trades, because they learned them only mechanically, and without any knowledge of the principles.

With regard to the tremendous and awful catastrophe, which, on the 26th of March, 1812, laid the whole city in ruins, it was remarked, that, previously to the moment of its occurrence, a great drought had prevailed throughout the whole province.

Not a single drop of rain had fallen within ninety leagues of Caraccas, during the five preceding months. On the 26th of March the weather was remarkably hot: the air was calm, and the sky unclouded. It was Holy Thursday, and a great part of the population was assembled in the churches. Nothing seemed to presage the calamities which took place. At seven minutes after four in the afternoon, the first shock was felt. It was sufficiently powerful to make the bells in the churches toll; and it lasted five or six minutes, during which time the ground was in a continual undulating movement, and seemed to heave up like a boiling liquid. The danger was thought to be past, when a tremendous subterraneous noise was heard, resembling the rolling of thunder, loud and of long continuance. This noise preceded a perpendicular motion of three or four seconds, followed by an undulatory movement somewhat longer. The shocks were in opposite directions, from north to south, and from east to west. Within the space of a single minute, the whole town was overthrown; and near ten thousand of the inhabitants were buried under the ruins of the houses and churches. The procession had not yet set out; but the crowd was so great in the churches, that betwixt three and four thousand persons were crushed by the fall of their vaulted roofs. Two of the churches, each more than one hundred and fifty feet high, and supported by pillars of twelve or fifteen feet in diameter, left masses of ruin scarcely exceeding six feet in elevation: the sinking of the ruins was so great that there scarcely remained any vestiges of pillars or columns. The barracks almost wholly disappeared. A regiment of troops of the line, that was assembled under arms, ready to join the procession, was, with the exception of a few men, buried under the ruins of this great edifice. Nine-tenths of the town were entirely destroyed; and the walls of such of the houses as were not thrown down were cracked in such a manner as to be uninhabitable. The cathedral, supported by enormous buttresses, remained standing.

The ensuing night presented the most distressing scene of desolation and sorrow that can be imagined. A thick cloud of dust, which had risen high above the ruins and darkened the sky like a fog, had settled on the ground. No shock was now felt, and never was a night more calm or serene. The moon, nearly full, illumined the whole scene, and the aspect of the sky formed a perfect contrast to that of the earth, covered with the dead, and heaped with ruins. Mothers were seen bearing in their arms their children, whom they hoped to recal to life. Desolated families wandered through the city, seeking brothers, husbands, friends, of whose fate they were ignorant, and whom they believed to have been lost in the crowd. The people pressed along streets, which could not now be recognized but by long piles of ruins. The wounded, buried under the ruins, implored, by their cries, the help of those who passed by, and nearly two thousand were dug out. Never was pity displayed in a more affecting manner: never had it been more ingeniously active than in the efforts that were employed to save the miserable victims, whose groans reached the ear. Implements for digging and clearing away the ruins were entirely wanting; and the people were obliged to use their bare hands to disinter the living. The wounded were laid on the banks of the small river Guayra, with no other shelter than the foliage of the trees. Beds, linen to dress the wounds, instruments of surgery, medicines, and objects of the most urgent necessity, had all been buried under the ruins. During the first days, every thing, even food, was wanting. Water also became scarce in the city. The commotion had rent the pipes of the fountains: the falling in of the earth had choked up the sources from which they had been supplied: and it became necessary, in order to obtain water, to go down to the Guayra, and vessels to convey it in were wanting.

There remained a duty to be fulfilled toward the dead, which was enjoined at once by piety and the dread of infection. As it was impossible to inter so

many thousand corpses half buried under the ruins, commissaries were appointed to burn them. For this purpose, immense funeral piles were erected among the heaps of ruins; and the afflicting ceremony lasted several days. Amid so many calamities, the people devoted themselves to those religious duties, which they thought were most fitted to appease the wrath of heaven. Some, assembling in processions, sang funeral hymns: others, in a state of distraction, confessed their sins aloud in the streets. Restitutions were promised by persons who had never been accused of fraud; and families, who had long been enemies, were now drawn together by the tie of common calamity.

Twelfth Day's Instruction.

TERRA FIRMA CONTINUED.

FROM Caraccas we will accompany Baron de Humboldt and his friend on their excursion across the valleys of Aragua to the river Apuré. The account of their voyage down that river, and up the Oronoko to the Great Cataract, has already been related.

Narrative of the Journey of Messrs. HUMBOLDT *and* BONPLAND *from the Caraccas to the river Apuré.*

THESE gentlemen set out from Caraccas on the 7th of February, 1800: and, following the right bank of the river *Guayra*, by a road cut out of the rock, they soon afterwards reached *La Vega*. The church of this village displayed itself in a picturesque manner, on a range of hills covered with vegetation; and the scattered houses, surrounded by date trees, seemed to proclaim the easy circumstances of the inhabitants. The rounded summit of an adjacent mountain, and a ridge

of rock, resembling an immense wall, impressed a singular character on the landscape. The neighbouring country furnishes abundance of peaches, quinces, and other fruits of European origin, with which the market at Caraccas is supplied.

At some distance beyond La Vega the road became fatiguing, and the valley narrowed considerably. Here the Guayra assumed such a serpentine form, that they had to cross it no fewer than seventeen times. On the banks of this river they were delighted with the appearance of beautiful gramineous plants, which, in some places, grew to the height of thirty feet. Every hut they passed was surrounded by enormous trees of the fruit called aligator pear. They slept at a plantation of sugar canes. The house was of square form, and contained near eighty negroes. These were all lying on skins of oxen, spread upon the ground. The house looked like a barrack, for in each apartment of it there were four slaves. A dozen fires were burning in the farm-yard, where people were employed in dressing victuals.

On the 8th of February, the travellers set out at sun-rise, and proceeded over a range of mountains, and through a thickly wooded country of savage aspect, in which the plants of the valley of Caraccas gradually disappeared. The road, however, was a much frequented one; and long trains of mules and oxen were met at almost every step. In one of the valleys they saw several cascades, that were surrounded by the richest vegetation imaginable. Among other fine plants were arborescent ferns, the trunks of which reached the height of twenty-five feet. The torrent was shaded by a great variety of beautiful flowering plants and shrubs. At the foot of the mountains the travellers entered a narrow valley, in which, near a small village, they found coffee-trees, plantains, and potatoes, all cultivated on the same spot of ground.

Leaving the mountains, they entered a highly cultivated country, covered with hamlets and villages,

several of which were so extensive that, in Europe, they would have been denominated towns. In the valley or plain of the river *Tuy*, they passed *Vittoria*, and three other villages, which together contained about thirty thousand inhabitants. Vittoria is situated apparently at the bottom of a lake, the waters of which have been drained off or dried up. It contained, at this time, many fine edifices, and a church, decorated with doric columns, and about seven thousand inhabitants. This place possessed all the resources of commercial industry; and its environs presented to the travellers a remarkable aspect with regard to agriculture. On a surface, little less than two thousand feet above the level of the sea, they beheld fields of corn, mingled with plantations of sugar-canes, coffee, and plantains. Baron de Humboldt bears testimony to the humane treatment which the negroes experience not only here, but in most of the Spanish colonies. He says, that they have each a small spot of ground to cultivate: that they have Saturdays and Sundays to themselves; and that they all keep poultry, and many of them have pigs.

In the valley of the Tuy a gold mine is said to have formerly been worked; and grains of this metal are still occasionally picked up. The baron was shown a deep ravine in which the mine was situated, but all traces of it had been obliterated by the falling in of the earth. Great trees were now growing on the spot where, twenty years before, the gold washers had worked; and the vegetation was every where of a magnificent description.

On the 11th the travellers proceeded along the banks of the Tuy. The morning was cool and humid, and the air seemed embalmed by the delicious odour of liliaceous plants. In one part of their journey the road, for four leagues, led them through plantations of sugar, indigo, cotton, and coffee. All the villages through which they passed, indicated their origin to have been from monks and missions; the streets were

straight and parallel, crossing each other at right angles, and the church of each was in the middle of a square.

They remained some time at a village called *Cura*, on the borders of the *Lake of Valencia*, or *Tacaragua*, as it is denominated by the Indians. Here they were agreeably surprised, not only by the flourishing state of the agriculture, but at the obvious increase of a free and laborious population, accustomed to toil, and too needy to rely on the assistance of slaves. The great landholders of this neighbourhood were in the habit of letting out small separate farms to poor families, who applied themselves chiefly to the cultivation of cotton.

During seven days that they resided at Cura, the travellers adopted the manners of the inhabitants. They bathed twice, slept three times, and made four meals every day. In bathing, however, they were much annoyed by a great number of little brown hairs, from the pods of the plant called cowitch, that floated upon the water. When these small hairs, well characterized by the name of "pica-pica," stick to the body, they excite a violent irritation on the skin; the dart is felt, but the cause is unperceived.

From Cura they made numerous excursions to the rocky islands that rise in the midst of the lake of Valencia. The opposite banks of this lake displayed a singular contrast. Those on the south were desert and almost uninhabited, and a screen of high mountains gave them a gloomy and disagreeable aspect. The northern shore, on the contrary, was cheerful, pastoral, and decorated with the rich cultivation of the sugar-cane, coffee, and cotton trees. Paths, bordered with elegant and aromatic plants, some of which were always in flower, crossed the plain and joined the scattered farms. Every house was surrounded by clumps of trees. In the season of drought, artificial irrigations preserved the verdure and fertility.

The waters of the lake of Valencia have, of late, been considerably diminished, owing, probably, to the

destruction of the circumjacent forests, the clearing of the plains, and the consequent evaporation of the moisture. Like the lakes of the valley of Mexico, this lake forms the centre of twelve or fourteen small rivers, none of which have any communication with the ocean. The inhabitants, unacquainted with the effects of evaporation, have long imagined it has some subterranean outlet, by which a quantity of water escapes, equal to that which flows into it from the rivers; but this undoubtedly is an error.

The lake of Valencia is about fourteen leagues in length, and four in width; and is full of islands. These embellish the scenery, by the picturesque form of their rocks, and the appearance of the vegetation with which they are covered. They are fifteen in number, distributed in three groups, and are partly cultivated. The lake itself is well stocked with fish, though it is said to produce only three kinds. It is also inhabited by a small but harmless species of alligators, some of which approached the travellers whilst they were bathing.

In times of great drought, when the waters, in their retreat, leave a muddy sediment exposed to the heat of the sun, the environs of this lake are unhealthy; but, during the other seasons of the year, there are no peculiarly prevalent diseases. The valleys of some of the adjacent mountains contain mineral springs of different kinds, and hot springs of very high temperature.

In the evening of the 21st of February, the travellers proceeded towards the city of New Valencia. The heat of the sun had been so excessive, that they set out at close of day. The night was gloomy; and at a place where the ground was nearly covered with bushes, the horses were frightened by the yell of an animal, that seemed closely to follow them. It was a large tiger, or jaguar. This beast was well known to the Indians, who said that it had roamed for three years among the mountains, had constantly escaped the pursuit of the boldest hunters, and had carried off many horses and

mules, even from the midst of enclosures. The animal continued to pursue the travellers to a considerable distance, but it did not attack them.

The city of *New Valencia*, at which they soon afterwards arrived, is built on a plain near the western bank of the lake. It occupies a considerable space of ground, but does not contain more than six or seven thousand inhabitants. The streets are broad, and the dimensions of the market-place very great. The houses being low, there is a great disproportion between the population of the town and the space that it occupies.

In the neighbourhood of Valencia *termites*, or *white ants*, are found in such immense numbers, that it is scarcely possible to form an idea of the havoc they commit, and of the sinking of the ground that is occasioned by them. Their excavations are said to resemble subterraneous canals; these are filled with water in the time of the rains, and become dangerous to the buildings of the town. In one part of the mountains Baron de Humboldt found a small chapel, destined, according to its inscription, for prayers to be addressed to heaven, for the destruction of the *termites*.

[The country around this town furnishes almost every sort of tropical provision and fruit in the greatest abundance, and the highest perfection; and supplies the markets with every description of animal food at a low price.]

From Valencia the travellers proceeded to *Porto Cabello*, a town on the sea-coast, and about six leagues distant. The road was extremely picturesque, and a river, which accompanied their progress, tumbled down the rocks in beautiful cascades. The heat became stifling as they approached the coast. At Porto Cabello they were received with the utmost kindness by a French physician, whose house contained a collection of things extremely various. They found in it works on literature and natural history; notes on meteorology; skins of jaguars and of large aquatic serpents; live animals, monkeys, armadillos, and birds.

The climate of Porto Cabello was found to be less ardent than that of Guayra, and the breeze was stronger, more frequent, and more regular. The port or harbour resembles a little inland lake; and the entrance is so narrow, that only one vessel can pass at a time. The largest ships, however, can enter; and they are here defended against the fury of the winds, from whatever quarter they may blow. So little does Porto Cabello partake of those agitations which prevail, with more or less violence, in nearly all tropical seas, that it has been indebted to this circumstance for its name, which was meant to imply that even the largest vessels may in this harbour be as effectually secured by a rope, as elsewhere they would by a cable. The shores are so steep that almost every description of vessel can be brought alongside the wharf, and loaded and unloaded without the aid of boats.

It must be remarked, that all the sea-ports of Terra Firma are infested with a species of marine worms, called tarets. There is no harbour nor river that receives salt-water which does not swarm with them; and they are particularly numerous in Porto Cabello. These worms attach themselves to the bottoms of ships, and penetrate the timbers with so much injury that no vessel, the bottom of which is not secured by a copper sheeting, can long remain in any of the ports, without being injured by them.

Porto Cabello is a place of deposit for productions to and from all the eastern parts of the province of Venezuela. The town is surrounded by the sea, except for a space of about four hundred feet; and across this a canal has been cut, which renders the town an island. There is much marshy ground in the neighbourhood; and this, being filled with noisome and stagnant water, renders the place unhealthy.

The travellers left Porto Cabello on the 1st of March, to return to Valencia. They stopped at a farm, called *Burbula*, where they were shown a very extraordinary production of the vegetable kingdom, called

Paco de Vaca, or *Cow-tree*. This tree, on incisions being made into the trunk, yields a vegetable milk of nutricious quality, which is much used by the negroes. It is glutinous, tolerably thick, destitute of acrimony, has an agreeable and balmy smell, and when exposed for some time to the air, it produces a coagulum which the inhabitants call cheese. Baron de Humboldt says, that he drank a considerable quantity of this juice before he went to bed, and again in the morning, without experiencing any injurious effects from it: the viscosity alone rendered it somewhat disagreeable. The cow-tree grows in the midst of rocks, has dry coriaceous leaves, and its roots can scarcely penetrate the joints of the stone. For several months in the year, not a single shower moistens its foliage. Its branches appear dead and dried; yet when the trunk is pierced, the juice flows freely from it. It is at the rising of the sun that this vegetable fountain is most abundant. The negroes and Indians are then seen hastening from all quarters, furnished with large bowls, to receive the milk.

From Burbula the travellers went to *Guacara*, and passed three days there, on the borders of the lake of Valencia. It was a season of carnival, and all was gaiety. The sports, however, were somewhat barbarous. Some of the inhabitants, for instance, led about an ass loaded with water; and wherever they found a window open, they sprinkled the apartment within by means of a pump. Others carried bags, filled with the hairs of *pica-pica*, or cowitch; and these hairs they blew into the faces of persons who passed by.

On their return to Valencia, Baron de Humboldt and his friend continued but a short time in that city. They then finally left it, and after traversing a country well peopled, and embellished with cultivation, they entered, about mid-day, the plains of the *Llanos*. Here, for an immense distance, the country before them was a perfect level, destitute of hills and ine-

qualities. The earth was hot, sterile, and destitute of vegetation. At the height at which they sat on their mules, not a breath of air was felt, yet, in the midst of all this apparent calm, whirls of dust incessantly arose, driven on by small currents of air that glided only over the surface of the ground. These *sand winds* augmented the suffocating heat of the atmosphere. On all sides the plains seemed to ascend towards the sky; and the vast and profound solitude before them appeared like an ocean covered with sea weeds: the trunks of a few scattered palm-trees seemed, in the line of the horizon, like the masts of ships. The whole scene was awful, sad, and gloomy. The uniform landscape of the Llanos; the extreme scarcity of inhabitants; the lonely trunks of the palm-trees; fatigue of travelling beneath a burning sky, and in an atmosphere darkened by dust: all these causes combined made Llanos appear far more extensive than they are in reality.

The travellers, in crossing them, passed two nights on horseback; and, beneath the palm-trees, sought in vain by day for some shelter from the ardour of the sun. Just before the third night set in, they arrived at a little farm, a solitary house, surrounded by a few huts, covered with reeds and skins. No enclosure of any kind was to be seen: the horses, oxen, and mules rambled where they pleased, and were brought together by men naked to the waist, and armed with lances, who scoured the plain on horseback for that purpose. An old negro slave had the management of this farm; and, though he had several thousand cows under his superintendance, the travellers in vain entreated for a bowl of milk. They were obliged to content themselves with some fetid water from a neighbouring pool; and this the negro advised them to drink through a piece of linen cloth, that they might not be incommoded by the smell, or swallow the clay that was suspended in it.

After having suffered great inconveniences from the

excessive heat of the sun, the travellers proceeded until they reached *Calabozo*, a flourishing little town in the midst of the Llanos, and containing a population of about five thousand souls. Here they most unexpectedly found an ingenious inhabitant, who, from descriptions in some philosophical works that he possessed, had constructed an electrical machine of considerable dimensions. The delight of this person, on meeting with such intelligent travellers as Messrs. Humboldt and Bonpland, may easily be imagined.

The conversation which took place on electrical subjects, led to an inquiry by the travellers concerning the gymnotus, or electrical eel; which had been an object of research to them, since their first arrival in America. They were desirous of procuring some of these eels at Calabozo, but the dread of them among the Indians was so great that the offer of reward was unavailing. The travellers themselves, therefore, resolved to proceed to a stream which contained several of them, and which, in a time of drought, formed a bason of muddy water surrounded by trees. The electric eels are difficult to be caught by nets, on account of their extreme agility, and their burying themselves in the mud. The Indians told them that they would "set the fish on sleep," or intoxicate them with horses. The travellers found it difficult to conceive what this meant: but, in a short time, they saw several persons who had been sent to the savanna, return with about thirty horses and mules which they had collected. The extraordinary noise caused by the horses' hoofs, on approaching and entering the water, made the fish issue from the mud, and excited them to combat. These yellowish and livid eels, resembling large aquatic serpents, swam on the surface of the water, and crowded under the bellies of the horses and mules. Several Indians, furnished with harpoons, and long slender reeds, closely surrounded the pool; and by their wild cries, and the length of their reeds, prevented the horses from reaching the bank and running away. The eels stunned the horses.

by repeated shocks, like those from an electric battery, which they are capable of giving. Several of the horses sank beneath the violence of the invisible strokes which they received on all sides; and, stunned by the force and frequency of them, disappeared under the water. Others, panting, with mane erect and haggard eyes, expressive of anguish, raised themselves, and endeavoured to flee from the storm by which they were overtaken. In less than five minutes two of the horses were drowned. The eels, each about five feet long, pressed themselves against the belly of the horses, and made a discharge along the whole extent of their electric organ. By the shock thus received, these horses were stunned; and, no doubt, were drowned from the impossibility of rising amid the prolonged struggle between the other horses and the eels. At length the eels became exhausted, and timidly approached the edge of the pool, where several of them were caught by means of small harpoons fastened to long cords.

Baron de Humboldt says, that some of these eels were upwards of five feet in length; and that one of them three feet ten inches long weighed twelve pounds. It would, he observes, be temerity to expose oneself to the first stroke of a large and strongly irritated gymnotus: that a stroke from such a fish would be productive of more pain and numbness than from the discharge of a large electric jar; and that he received so dreadful a shock, by imprudently placing his feet on one just taken out of the water, that he was affected, during the rest of the day, with a violent pain in his knees, and almost in every joint.

On the 24th of March the travellers left Calabozo, highly satisfied with their abode, and with their success in numerous experiments which they had made upon the electric eels. As they advanced into the southern part of the Llanos, the Baron says, they found the ground more dusty, more destitute of herbage, and more cracked, by the effect of long drought, than they had before seen it. By degrees the palm-trees disappeared,

Though the air felt quite calm at the height of nine or ten feet, they were frequently enveloped in whirlwinds of dust, caused by little currents of air that swept along the ground. About four o'clock in the afternoon, they found an Indian girl, twelve or thirteen years of age, lying on her back. She was naked, and in a state of total exhaustion, having a pitcher overturned, and half filled with sand, lying by her side. They roused her by washing her face, and forcing her to drink a few drops of wine. She was at first frightened at seeing so many persons around her; but, by degrees, she took courage and conversed with the guides. She could not, however, be prevailed with to return to a farm which she had left. Her master, she said, had discharged her, because, at the end of a long sickness, he had found she was less able to work than before. The menaces, and the entreaties of the travellers to induce her to return, were equally fruitless. Insensible to suffering, she persisted in her resolution of going to one of the Indian missions, in the vicinity of Calabozo. The travellers took the sand out of her pitcher, and filled it with water, after which she resumed her way.

During the night they forded the *Uritucu*, a river which is infested by a breed of crocodiles that are remarkable for their ferocity. The travellers were advised to prevent their dogs from going to drink in the river, as it often happens that the crocodiles come out of the water and pursue the dogs on the shore. They were shown a hut, or rather a kind of shed, in which the person in whose house they had resided at Calabozo, had witnessed a very extraordinary scene. He was sleeping with a friend on a bench covered with leather, when, early in the morning, he was awakened by violent shakes and an horrible noise. Clods of earth were thrown into the middle of the hut, presently a young crocodile issued from under the bed, darted at a dog that lay on the threshold of the door, and, missing him in the impetuosity of his spring, he ran toward the beach to attain the river. On examining the spot where

the bedstead was placed, the cause of this strange adventure was easily discovered. The ground was disturbed to a considerable depth. It was dried mud that had covered the crocodile, in that state of summer sleep, in which many of the species lie during the absence of the rains. The noise of men and horses, perhaps the smell of the dog, had awakened the crocodile. The hut having been near the edge of the pool, and inundated during part of the year, the crocodile had, no doubt, entered, at the time of the inundation of the savannas, by the same opening through which it had been seen to go out.

The travellers passed the *Guarico*, and encamped on a savanna beyond it. Enormous bats hovered over their hammocks during great part of the night. Early in the morning they pursued their way over low grounds that had been often inundated; and, on the 27th of March, arrived at the village of *San Fernando*, the capital of the mission of the Capuchins, in the province of *Varinas*. This was the termination of their journey over the *plains*.

Thirteenth Day's Instruction.

TERRA FIRMA CONCLUDED.

Maracaïbo—Santa Martha—Carthagena—Darien, or Panama—Popayan, and New Granada.

THE provinces of Cumana and Caraccas, and the principal places they contain, have already been described. We will now proceed westward from Caraccas, and enter Maracaïbo.

Maracaïbo.

This province is included within the capitania general of Caraccas. It surrounds an extensive lake of

the same name, which was that of a cacique, or Indian prince, who anciently ruled there. The soil is barren, and the climate hot and unhealthy.

The *Lake of Maracaïbo* is about a hundred and fifty miles in length, and ninety in its greatest width. It communicates, by a narrow passage, with the *Gulf of Venezuela* and the sea, and is navigable by vessels of the greatest burthen. Except in the parts that are near the sea, the waters of this lake are fresh, and fit for drinking. On the north-eastern border of it there is an inexhaustible vein of mineral pitch, the bituminous vapours issuing from which are so easily inflamed that, during the night, phosphoric fires are continually seen. These, which are more frequent in hot than in cool weather, are named the "lantern of Maracaïbo," because they serve as a beacon to such persons as navigate the lake. The sterility of the soil, and the noxious atmosphere of the borders of the lake, discourage culture and population. Hence the Indians of this part of the country have been more desirous to fix their habitations on the lake itself than on its banks. They drive stakes into the water, and on these construct their huts. When the Spaniards first arrived at Maracaïbo, they found, on the water, several villages, built without order or design, but with considerable solidity. Hence they gave to these villages the appellation of *Venezuela*, or "Little Venice," an appellation which has since been transferred to the whole province. There are now only four of the villages left. These have a church upon the water, under the superintendance of a curate. The inhabitants occasionally go on shore in quest of provisions; but their chief subsistence is derived from fishing and catching wild-ducks. The latter pursuit is thus conducted. They always have, floating upon the lake, and particularly around their habitations, a considerable number of empty calabashes: the intention of this is that the ducks may not be alarmed at the sight of them. When an Indian wants to catch any of these birds, he thrusts his head into a calabash, bored

in such a manner as to enable him to see without being seen. Thus equipped, no part of his body being visible, he swims to the place where the ducks are feeding. He then catches them by the legs, and draws them suddenly under water, before they have time to quack, or to make any movement which might warn their companions of the danger that threatens them. He ties the birds to his belt as he catches them, and does not retire till he has fully supplied his wants.

On the sea-coast, at the distance of some leagues eastward from the lake of Maracaïbo, is the city of *Coro*. There was formerly a great commercial establishment at this place, and, until the foundation of Caraccas, Coro was considered the capital of Venezuela. It is situated in a dry, sandy, and sterile plain, destitute of water. Three leagues from the city are some hills, where the inhabitants cultivate, though not in abundance, the various productions of the country. The traffic that is now carried on is chiefly in mules, goats, hides, sheepskins, cheese, and some other articles, which are brought chiefly from the interior of the country, and shipped at Coro for the West India islands. Few slaves are seen in Coro, nearly all the labour being performed by Indians, and at very low wages. The houses have been well built, but most of them are now going to decay. The public edifices consecrated to religion consist of one parish church, a monastery, where there are seven or eight monks, and three chapels of ease to the parish church. There was formerly a cathedral; but though Coro is still called a city, it has neither a bishop nor chapter.

If we direct our course southward from Coro for about ninety miles, we reach *Carora*, a tolerably well built town, on the banks of the river *Morera*, and in a situation which is peculiarly healthy. The soil, however, on which it stands, is barren, being covered with thorny plants, and yielding few vegetable productions that are useful to mankind; yet the inhabitants contrive to keep a great number of oxen, mules, sheep, and

goats, the skins of which constitute an important article of trade. The streets of Carora are wide, and built in straight lines; and the parish church is a handsome structure. The administration of justice and police is in the hands of a lieutenant governor and common council.

From Carora we proceed over a mountainous country to *Truxillo*, a town situated in a narrow valley, and so enclosed by mountains as to have the shape of a coffin. It contains a parish church, two monasteries, and a nunnery. The land around it produces sugar, cacao or chocolate-nuts, indigo, coffee, and nearly all the other productions of the torrid zone. Wheat grows here extremely well, and its flour differs little either in quality or excellence from that of Europe. The air of this place is salubrious, and the soil fertile. The inhabitants breed sheep and goats, and make a considerable quantity of cheese.

At the distance of about one hundred miles east of Truxillo is *Barquisimeto*, a handsome town, situated on a plain so elevated that, although it is within nine degrees of the equator, it enjoys all the coolness of a temperate climate. In the plains, the valleys, and rising grounds by which this town is surrounded, the inhabitants find sufficient space, not only to apply their industry, but to gratify their taste. Many of them feed cattle; some cultivate sugar-canes or wheat, and others chocolate or coffee.

From Barquisimeto, if we proceed in a south-westerly direction for about a hundred and twenty miles, we arrive at the city of *Varinas*. This place is about sixty miles south of Truxillo. In the year 1787 it was detached from the government of Maracaïbo, to which it had previously belonged, and was itself made the seat of a separate government. It is watered by a river that runs south into the Oronoko, and it enjoys a tolerably pure atmosphere, though the heat which generally prevails is very great. The houses are indifferently built, and the only public edifices are a parish church

and a hospital. This place is noted in the commercial parts of Europe on account of the tobacco which the land in its vicinity produces, and which is generally esteemed superior to any other. The excellence of the land is so great that it produces also an abundance of sugar, coffee, cotton, and indigo. The inhabitants, occupied almost exclusively in the culture of tobacco, formerly believed that nature had refused to the soil of Varinas the property of yielding any other production; but this prejudice has long been dissipated: at this day they cultivate and attempt every thing.

In the intermediate country betwixt Varinas and the southern extremity of the lake of Maracaïbo, lies a city called *Merida*, within the boundaries of New Granada, and situated in a valley three leagues in length, and about three quarters of a league wide in the broadest place. It is surrounded by three rivers, none of which, however, are navigable, on account of the rapidity of their currents and the rocks over which, in many places, their waters fall. The environs of Merida are extremely fertile. Tropical fruits of various kinds; pulse, maize, potatoes, cassava, and different species of grain, are here so abundant, that even the poorest people have always more food than is necessary for their subsistence. The inhabitants are an industrious and ingenious people. Some adjacent towns are furnished from Merida with butcher's meat, which is here purchasable at a very moderate price. The number of inhabitants, including all colours and classes, amounts to about eleven thousand. Merida is the seat of a bishop; and has a college and a seminary, where ministers for the catholic worship are brought up, and where youth receive those principles of education that are suitable to every station of life. It contains a cathedral, and several parish churches and monasteries. In this city persons of colour apply themselves to many useful occupations. They fabricate different articles in cotton and wool, many of which are preferred, for their cheapness, to similar articles imported from Europe.

Passing round the southern extremity of the lake of Maracaïbo, and proceeding northward, along the western bank, as far as the tenth degree of north latitude, we come to the town of *Maracaïbo*, the capital of the province. It is situated on the shore of the lake, and near the strait that divides it from the Gulf of Venezuela. Many of the houses are constructed of stone, and with considerable taste, but their general covering is a kind of thatch formed of reeds; and some of them are constructed wholly of reeds. The climate of this place is intensely hot, and the immediately surrounding country is sandy and barren, destitute even of the least spot of vegetative earth. During the months of July and August the heat is so intense that the air, when breathed, feels as if it had issued from a furnace. Maracaïbo is subject to dreadful tempests: thunder here breaks with the most alarming explosion; and the lightening frequently sets fire to ships and houses. The rains that accompany these tempests are sometimes so excessive as to form a torrent, which traverses the city with inconceivable rapidity; and which, in many instances, has been known to bear even houses and trees before it.

Education is almost wholly neglected at Maracaïbo, yet the inhabitants are remarkable for their lively wit, their application to literature, and the progress they make in knowledge. They have great activity, courage, and genius; but they are reproached with having little regard to their word, and being deceitful in nearly all their dealings.

Santa Martha.

From Maracaïbo, if we proceed westward, we enter the province of *Santa Martha.* This district is about seventy leagues in length, and from thirty to sixty in breadth. Some parts of the interior are mountainous; and several of the mountains are of great height, and have their summits covered with perpetual snow. Not-

withstanding this, in all the level maritime tracts, the heat is intense. Many parts of this province are extremely fertile, and yield an abundance of grain and fruit; and among the mountains there are mines of gold, silver, and precious stones, but these are not now worked. The province is still subject to the Spaniards, but it is thinly inhabited.

The only town it contains is on the sea coast, and called *Santa Martha*. Its environs are fertile, and produce great quantities of cotton, cocoa, tobacco, sugar, and some wheat. In the rich pastures adjacent to it an abundance of cattle and some mules are bred. The port is large and convenient, and is sheltered by lofty mountains, the northern termination of the Andes. Santa Martha was formerly a place of considerable trade, but it is not now much frequented. Its situation is on a low and rugged tract of land, at the mouth of a small river; and houses for the accommodation of about thirty families are constructed of canes, and covered with palmeto leaves or tiles. Like Carthagena and Portobello, Santa Martha has been frequently pillaged by the enemies of Spain. It was entirely destroyed by Sir Francis Drake, in the year 1585.

Carthagena.

Westward of Santa Martha is the river *Magdalena*. This forms the boundary betwixt the provinces of Santa Martha and Carthagena. It rises not far from the city of Popayan, and, after running in a northerly course more than a thousand miles, augmented by various streams, it discharges itself into the Caribbean sea.

The province of *Carthagena* extends as far as the Gulf of Darien. It is in general a marshy, thinly peopled, and ill cultivated tract. Among the mountains, however, there are some fertile valleys. A considerable portion of its surface is covered with woods, which bear a perpetual verdure, and are inhabited by birds of exquisite plumage, and various kinds of wild

quadrupeds, reptiles, and insects. The united heat and moisture of the climate in Carthagena are such, that no European grain will prosper; but maize or Indian corn and rice, are abundant in all the cultivated parts of the district. There are many plantations of sugar-canes and cotton-trees; and the trees which produce the chocolate-nuts excel those of most of the neighbouring districts, both in the size and excellence of their fruit. Melons, grapes, oranges, dates, pine-apples, bananas, and nearly all the tropical fruits, are here found in great perfection.

Hurricanes and thunder-storms are very frequent in Carthagena from May to November. The pleasantest season is betwixt the months of December and April: the air is then serene, and the intenseness of the heat is considerably moderated by the prevalence of north-westerly breezes. This district contains two cities, seven towns, and ninety-six villages.

The metropolis is called *Carthagena;* and is a city and sea-port, built on a peninsula or sandy island, joined to the continent by two narrow artificial necks of land. It consists of five straight and well paved streets, which extend from the port to the distance of about six hundred paces. The houses are well and regularly built of stone and brick, and most of them have balconies of wood before them. The place is defended by a castle and strong fortifications. It contains a cathedral, a palace for the governor, eleven convents, and about twenty-two thousand inhabitants. The harbour is capacious, and of sufficient depth for vessels of heavy burthen; but its entrance is difficult of access, in consequence of numerous banks of sand which run across it. The chief trade carried on at Carthagena is in chocolate and cotton. This city has often been plundered by the enemies of Spain. It was besieged in 1752 by the English fleet under the command of Admiral Vernon, and most of its fortifications were destroyed.

A small town called *Tolu,* about sixty miles south of Carthagena, is noted for an excellent kind of balsam to

which it gives name, and which is obtained in considerable quantities from trees in its vicinity.

Darien, or Panama.

The western extremity of Terra Firma is formed by the Isthmus, or province of *Darien* or *Panama*, called also *Terra Firma proper*. This province extends from the gulf of Darien on the east, beyond the bay of Panama to *Veragua*, in North America.

The situation of Darien, between the northern and southern oceans, is such as to render it a province of great importance. Hence, and in consequence of the fertility of some of its lands, and of the gold which abounds in the sands of its rivers, numerous adventurers have, at different times, been induced to attempt the formation of settlements at Portobello, Panama, and other places. But the country is so extremely hot, and the low lands are so unhealthy, that these settlements have not been attended with the expected success.

The *Gulf of Darien*, the north-eastern boundary of the province, is an arm of the sea, more than one hundred and twenty miles in length; and contains three large islands and several small ones. Between this gulf and the town of Portobello there is a small and ill built town, called *Nombre di Dios*, situated on the bank of a spacious, but unsafe and incommodious harbour. It is surrounded by forests and morasses, and was some years ago deserted by its principal inhabitants, who removed to more healthy situations.

Portobello stands on the north coast of the isthmus, and on the declivity of a hill at the extremity of a harbour, which was originally discovered by Columbus in the year 1502. This harbour received its name of Portobello, from its extent, depth, and security; and from the apparent fertility of the lands adjacent to it. The town now consists of about one hundred and thirty houses, most of which have their lower story built of stone, and their upper parts of wood. It has one prin-

cipal street, which extends along the shore, and this is crossed by others that have been built down the declivity of the mountains. There are in Portobello two squares, a custom-house, a parish church, and two convents. It formerly had a large castle, but this was destroyed during the Spanish war, in 1739, by an attack of the English fleet under the command of admiral Vernon.

Some years ago Portobello was a place of considerable importance to the Spaniards, and, when its harbour was frequented by the Spanish fleet, it was a place of great trade. The climate, however, is extremely unhealthy; and the excessive heat is augmented by the situation of the town, which is surrounded by lofty mountains, that obstruct every current of air by which it might otherwise be refreshed.

If, from Portobello, we cross to the southern shore of the isthmus, we find there the city of *Panama*, in a hilly and insalubrious, but tolerably fertile territory, about eighty miles in extent. Panama was once a place of considerable trade, the residence of a governor, and the see of a bishop, and was an important depot for goods from Peru and Chili. The streets are straight, broad, and paved; and the houses in general are constructed of wood and bricks, and covered with tiles; but a conflagration, in 1784, and a total decline of commerce, have tended to reduce the place to a miserable condition. The environs of Panama consist of savannas or grassy plains, gentle eminences, and copses, among which numerous farm and plantation-houses are scattered.

There is a bay or harbour, in which ships can lie in perfect safety, at the distance of three leagues from the shore. This bay was formerly noted for the production of pearl oysters, and had an extensive pearl fishery. The fishery is still continued, but it is by no means so productive as it formerly was.

Nearly the whole territory of Darien is insalubrious, and is now almost abandoned to wild animals. The

miserable remains of the Indians who, in this province, escaped the Spanish sword and yoke, retired to the mountains, where their descendants still lead a wandering life, and subsist chiefly by the pursuits of the chase. Many rivers and brooks rise in the interior, and descend some into the Caribbean sea, and others into the Pacific ocean: few of them are navigable, for their mouths are choked by bars and shoals of sand. The only considerable streams are those of the *Darien* and the *Chagré*, both of which are navigable to a considerable distance inland. The latter has its source not far from Panama, runs in a north-westerly direction, and falls into the gulf of Mexico about ten leagues west of Portobello.

Along the banks of these rivers there are forests of great depth. It is said that nothing can exceed in grandeur the prospects which the river Chagré affords. The most fertile imagination of a painter could never supply pictures so rich as the rural landscapes here exhibited. The groves which shade the plains, and extend their branches to the water; and the various dimensions of the trees that clothe the eminences, the texture and appearance of their leaves, the figure of their fruits, and the different tints of their foliage, are all truly admirable. To these must be added the brilliant plumage of the birds, and the singular appearance of numerous kinds of monkeys of various sizes and colours, some black, others brown, and others reddish or striped, which are seen to skip in troops from tree to tree, and to hang from the branches, throwing themselves into strange postures, and making a thousand extraordinary grimaces.

The isthmus of Darien, measured from Portobello to Panama, its two chief towns, is not more than thirty-seven miles in width. It is strengthened, however, by a chain of lofty mountains, which stretch through its whole length, and render it a solid barrier, capable of resisting the impulse of the opposite oceans.

Probably the greatest event which the physical cir-

cumstances of the globe at this day present to the enterprise of man, would be the formation of a navigable canal across this isthmus, and the consequent junction of the Atlantic with the Pacific Ocean. This magnificent project, pregnant with the most important consequences to mankind, is stated to be undoubtedly practicable. Baron de Humboldt has enumerated no fewer than nine different points, in North and South America, at which a junction of these oceans could be effected with reasonable prospects of success. Three only of these, however, are through the isthmus of Darien. It was formerly imagined that the river Chagré, which is navigable within five leagues of Panama, might have been made to form part of the communication. But a canal cut through the mountains, that intervene between this river and the Pacific Ocean, would be both a difficult and a hazardous undertaking, and could probably only be effected on a small scale, and by an expensive system of locks and tunnels. A more practicable course would be, from the Caribbean sea, through the river *San Juan*, the great lake of *Nicaragua*, and the river *Leon*, which falls into the Pacific; or, to dig a canal from a bay in the Pacific, near Cape *Corrientes*, through land of no great elevation, and only fifteen or twenty miles in length, to the navigable stream of Naiapi, that falls into a river which discharges its waters into the Gulf of Darien.

Popayan.

Proceeding from the province of Darien, in a southerly direction, we enter that of *Popayan*, a district which has been in the possession of the Spaniards nearly three hundred years, and which is bounded on the south by Peru, and on the north and east by New Granada. The soil of this district is in general fertile, and yields an abundance of grain and fruit; and its pastures feed great numbers of cattle. Popayan is traversed by a range of lofty mountains, which are rich

in mines of gold, and precious stones. Its plains and valleys are watered by many streams; of which the rivers *Santa Martha* and *Magdalena*, are the most considerable.

The capital of this province is a tolerably well built city, on the bank of the river Cauca, in the midst of a delicious plain, and about a hundred miles west of the Pacific Ocean. It is the residence of a governor, and contains a cathedral, several convents, an university, and other public buildings; and about eight thousand inhabitants. The climate of Popayan is so mild that it enjoys a perpetual spring; but it is subject to earthquakes and violent storms of thunder. Towards the north and east, this place commands an unbounded prospect; but westward the view is interrupted by hills, covered with wood.

New Granada.

Adjacent to Popayan, on the west, lies *New Granada*, a province of considerable extent, and divided into seven civil and five military governments. Many parts of this province are extremely mountainous; and, in consequence of its extent and situation, it enjoys a great variety of climates. Its mountains abound in the precious metals: its forests are repositories of wild animals and noxious reptiles; and its level tracts are fertile in grain, fruits, roots, and pastures. The Spanish settlements in New Granada were formerly very productive, and the country was populous; but, for some years past, it has suffered much from ferocious political contests.

The capital of this province is *Santa Fé de Begota*, a city which has been built on an extensive plain, elevated several thousand feet above the level of the ocean, and distant from it nearly one hundred and eighty miles. This plain is encircled by lofty mountains, and has the appearance of having anciently been the bed of an immense lake. Santa Fé is the seat of

government, the see of an archbishop, and a place of considerable trade. It is tolerably well built, and contains a magnificent cathedral, an university, several convents, and monasteries, and about forty thousand inhabitants. The river which runs through it, rushes, by a narrow inlet, down a tremendous cataract, called *Tequendama.*

The province of New Granada contains several other towns; but of these only two appear to be deserving of notice, namely, *Merida* and *Honda.* The former has already been described*; and the latter is a pleasant little town on the bank of the *Magdalena,* and about sixty miles north-west of Santa Fé.

Fourteenth Day's Instruction.

PERU.

THREE hundred years ago *Peru* was a flourishing and powerful empire, the only country of America, besides Mexico, that deserved the appellation of a civilized kingdom. It extended six hundred leagues along the Pacific Ocean, abounded in the precious metals, and was governed by a race of princes, with the title of *Incas,* or "lords," who were respected as fathers, obeyed as monarchs, and revered as divinities. The Peruvian monarchs possessed unbounded power; and this seems to have been uniformly accompanied with attention to the welfare of their subjects. Their families were prohibited by the laws from intermarrying with any others than descendants of the regal line; and they were distinguished by dress and ornaments, which it was unlawful for any others to assume. The monarch himself appeared with ensigns of royalty, that were reserved for him alone. The city of *Cuzco* was

* See page 167.

the capital of the empire; in this city there was a celebrated temple of the Sun, the object of sacred worship with the Peruvians; and this imaginary divinity was served by virgins of the royal blood.

A body of enterprizing and avaricious adventurers from Spain, tempted by the rumour that Peru abounded in gold and silver and precious stones, resolved, in the year 1524, to attempt the conquest of it. And, extraordinary as the fact may appear, this extensive empire was subdued by a body of a few hundred men, commanded by three persons of mean birth, Francis Pizarro, the illegitimate son of a Spanish gentleman; Almagro, a foundling; and Lucque, a priest and schoolmaster of Panama. A civil war in the country, the consequence of a disputed succession to the monarchy, enabled the superior weapons and military discipline of the invaders to overcome every obstacle, and at length to subjugate the country to the Spanish arms*.

Pizarro, who in the course of his operations, had received important succours from Spain, was appointed by that government to the command of the most important provinces of Peru; and Almagro received the command of a district adjoining upon that of Pizarro towards the south. They subsequently quarrelled; and a long and bloody contest took place, which terminated in the destruction of them both. It was not till after the year 1548, that tranquillity was restored, and that the authority of the Spanish government was as firmly established here as in the other colonies of Spain.

The *climate* of Peru is very various. The plains are temperate, the valleys are sultry, and the mountains are covered with snow; but, in no particular place is there found a sudden transition from intense heat to extreme cold. A transition of this kind may, however, be experienced by a change of situation; for, while the warmth of summer prevails in the plains,

* See an account of this conquest in "Biographical Conversations on Eminent Voyagers," p. 77 to 87.

the most piercing cold is felt on the mountains. Consequently the temperature of the climate is according to the high or low situation of the country. Near Lima spring commences about the end of the year, and winter disappears with the clouds that introduced it. The heat of summer is tempered by winds from the south, autumn is short, and winter begins in June or July. During this season a fog spreads itself, from north to south, through nearly the whole country. In Lower Peru, a district which extends through nearly ten degrees of latitude, it is said that no rain ever falls. The atmosphere, however, is perpetually loaded with fogs, which every night descend in the form of dew, and refresh the plants and grass. Hurricanes, thunder, and lightning are here little known; but among the Cordilleras rain and tempests are common. Earthquakes are so frequent and so destructive in their effects, that there are few places on that extensive coast which do not exhibit memorials of those dreadful convulsions of the earth.

Two chains of mountains traverse Peru, from south to north, in directions nearly parallel. One of these is the central chain of South America, or the Cordillera of the *Andes;* and the other, which is much lower, is called the Cordillera of the coast. It is between the latter and the coast, that the country, called *Lower Peru,* lies, forming an inclined plane, from ten to twenty leagues in breadth, and consisting, for the most part, of sandy deserts. The country between the two cordilleras is called the *Sierra,* or *High Peru.* This consists of barren mountains and rocks, intermixed with fertile and cultivated valleys.

The *soil* is not every where of equal fertility. From *Tumbez* to Lima, a space of two hundred and fifty leagues, the whole district is so barren that no herb is to be found, except in plains and valleys to which streams of water can be conveyed. Hence it appears how little fertile land there is in Peru; and how ill adapted it is by nature for becoming great or opulent

by its agricultural productions. The soil of the provinces in the interior is, however, more fertile than that of the country near the coast.

The want of roads, bridges, and canals, renders it difficult, in Peru, to convey bulky articles from the spot where they are raised. The want also of a market is an insuperable obstacle to any exertions for the improvement of the agriculture of this country. There are not even carts nor waggons for the conveyance of commodities; nor are there any other means of transporting them than on the backs of mules; and the gangs of mules that are employed for this purpose, are often compelled, by the want of roads, to travel over fields, where they trample under foot and devour the corn, and destroy the fences. Several of the coldest parts of Peru abound in forests; and in those that are more mild there is a perpetual succession of leaves, flowers, and fruit. In some of the warm districts are cultivated the sugar-cane, and other productions adapted to countries that lie under the torrid zone.

Many of the *mountains* of Peru are of prodigious height. Several of them have been volcanos, and some are yet such, having their sides covered with pumice-stones, and calcined earth. The summits of most of them are perpetually covered with snow. From the boundary where the snow never melts, nothing is seen for six or eight hundred feet, except naked rocks and dry sand. A little lower the rocks are covered with moss and heath: lower still there is a species of loose grass; and, lastly, in descending to spots which are about two miles above the level of the sea, snow is sometimes known to fall, even within the tropical regions.

The mountains of less height, which occupy the central parts of Peru, abound in *mines* of gold, silver, copper, and other metals; and the most valuable and productive mines are always found in mountains of the most desolate and unpromising appearance. The busi-

ness of mining is here carried on to a great extent. In the year 1791, there were wrought sixty-nine mines of gold, seven hundred and eighty-four of silver, four of quicksilver, four of copper, and twelve of lead; and the average profits of the gold and silver mines of Peru, estimated on ten years preceding 1789, amounted to nearly three millions and a half of dollars per annum. There is a famous mine of quicksilver at *Huancavelica*. This mine was discovered in 1566. It was purchased by the king of Spain four years afterwards, and, since that time, has continued to be a part of the royal domains.

The *commerce* of Peru is carried on by land with the provinces of La Plata; and by sea with the other Spanish colonies and the mother country. The chief exports are gold and silver, wine, brandy, sugar, Jesuits' bark, salt, and some kinds of coarse woollen manufactures. Its trade with Spain was carried on by Portobello and Panama, till 1748, when, instead of the journey by land to the former of these places, and the voyage from the latter, by the circuitous route of the East Indies and the Cape of Good Hope, vessels called register ships, conveyed the produce by a nearer course, round Cape Horn. Ships of this description continued to be employed in the trade of Peru with the mother country, till the war for American independence, during which there was little intercourse between Spain and this distant colony. At the peace of 1783, a system of free trade began to be carried into effect. According to this system, an unlimited intercourse, without licenses, or other restrictions, was permitted between certain ports of Spain and Callao, and a few ports of America. The result has been beneficial to Spain, and highly favourable to Peru. The inhabitants of the latter country have, in consequence, enjoyed foreign luxuries and conveniences at a much cheaper rate and in greater abundance than before: their industry has been excited, the value of their exports increased, and the produce of their mines has been nearly doubled.

The present *population* of Peru has been estimated to amount to upwards of one million of persons; about four-tenths of which are Indians, and the remainder European-Spaniards, Creoles, or descendants from Spaniards, negroes, mestees, mulattoes, and samboes. The *European-Spaniards* are either persons in office, employed in the military, civil, or ecclesiastical departments of the state; or they are adventurers, without fortune, credit, or connexions, who, in defiance of the laws, have escaped to America, in the expectation of acquiring wealth and consequence. The greater number of these perish miserably from the effects of their poverty and vices. Of the former class, many return to Spain, to enjoy the fortunes they have acquired; but there are a few who marry and leave families in Peru. The *Creoles* are excluded from most of the high offices of trust and honour; but many of them are admitted into the church, others practise law or physic, and others enter into commercial business. Some of the creole families have even been elevated to the rank of nobility. They are, in general, mild and humane in their dispositions, and hospitable and kind in their conduct. But, with all this excellence of character, they are extremely vain, and fond of show and parade. They entertain lofty notions of their own superiority, and great contempt for people of other casts.

The *Peruvian Indians* are said to have very limited capacities, and to have little or no variety in their characters. They are melancholy from temperament, timid and dispirited from oppression, dastardly in moments of danger, savage and cruel after victory, and severe and inexorable in the exercise of authority. They live in awe of the Spaniards, and are docile and obedient to their commands; but they secretly dislike them and their society. They are of distrustful tempers, and suspect that every one who does them a kindness, has a design to impose upon them. They are stout and robust, but are lazy, dirty, and improvident.

Their habitations are miserable hovels, destitute of every convenience or accommodation, and disgustingly filthy. Their dress is mean, and their food coarse and scanty. Their strongest propensity is to spirituous liquors; and to this indulgence they sacrifice every other consideration. Though they are considered converts to the Christian religion, they are still tainted with the superstitions of their ancestors. But they are great observers of the external rites and ceremonies of the church, and they expend large sums of money in masses and processions; a species of profusion from which they are not discouraged by the priests. The Indians of Peru are required to pay to the Spanish government a personal tax or tribute; but this is extremely moderate, and is to be regarded rather as a distinctive mark and a token of vassalage, than a serious burthen. Indians of noble birth, that is, of the families from which the caciques are taken, enjoy an exemption from tribute, and are considered equally qualified with Spaniards to fill important offices in the colony. In places where Indians are the sole inhabitants, they are still governed by their caciques. The Indians are subject to another burthen: the *mita*, or compulsory labour in the mines. Every male Indian, from eighteen to fifty years of age, must take his share in this service, which lasts for six months, and returns once in about three years and a half. Whatever be his occupation, he must leave it when his turn comes. Some Indians are compelled to travel two or three hundred leagues from home; and many take their families with them to the mines. They have only a small allowance for their travelling expenses; but they receive, for their work in the mines, at least half a dollar a day, and occasionally a sum much greater than this. This class of people are employed in the mines, because they are able to endure the fatigue and unwholesomeness of the labour, whilst Spaniards and negroes, though they have often been tried, always sink under it after a short time. More intolerable

hardship, or more flagrant injustice than the *mita*, cannot well be imagined: a forced conscription, for the purpose of digging riches from the bowels of the earth, to benefit only the employers, is the extremity of cruelty and injustice.

Besides European-Spaniards, Creoles, and Indians, the population of this country consists of mestees, quarteroons, cholos, negro slaves, and mulattoes. The *mestees* are the offspring of Spaniards and Indians, and are the next class in rank to the Creoles. They have not the privileges and exemptions of the Indians, nor are they subject to the same burthens. The *quarteroons* are the offspring of Spaniards and mestees, and are scarcely distinguishable from Spaniards. The *cholos*, on the contrary, spring from Indians and mestees, are classed with the Indians, and rendered subject to tribute. There are in Peru, a considerable number of *negro slaves*. These are either employed in domestic service, or on the sugar plantations and farms of their masters. Free negroes are very numerous, and are, in general, idle and disorderly. The *mulattoes* are called by Spanish writers, the gipsies of Spanish America; and they have this appellation from their resemblance, in complexion, manners, and character to the Spanish gipsies. The free mulattoes are usually tradesmen and mechanics.

Fifteenth Day's Instruction.

PERU CONTINUED.

PERU, as a Spanish province, is of much less extent than it was under the Incas. In the year 1718 Quito was separated from it: in 1778, it was further diminished by the separation of Potosi, and the south-eastern provinces, which were annexed to the vice-royalty

of the Rio Plata; and, of late, the inhabitants of some of the remaining parts have declared themselves independent, and have shaken off the yoke of the Spanish government.

It will be unnecessary to perplex you with a detail of the minute divisions of this territory; and you will attain a more distinct idea of its general topography, if I describe to you, in succession, the whole district, than if I were to separate the provinces under different heads, and to state the particulars respecting them in a detached form.

Quito.

I shall commence with *Quito*, a district which is about two hundred leagues in extent, from north to south, and two hundred and fifty from east to west. It is bounded on the north by Popayan and New Granada, on the east by Brazil, and on the west by the ocean. The valley of Quito, about nine thousand feet above the level of the sea, and, surrounded by mountains, exhibits some of the most singular and interesting scenes that can be imagined. Nature is here on a grand scale; and the country is distinguished by features of peculiar magnificence. The *climate* is various, according to the elevation of the soil, and the proximity of the mountains, rivers, and seas. Some districts are parched with intense heat, and others, though immediately under the equator, are chilled with snow and ice. Dreadful storms of thunder and lightning, and destructive earthquakes, frequently occur. During winter rain generally prevails; but a long drought sometimes happens in summer, and is productive of dangerous diseases. In many parts the *soil* is astonishingly fertile, and vegetables and fruit of numerous kinds are produced through the whole year. It frequently happens that fruits in maturity, fresh leaves, and blossoms, appear on the same tree. A similar incessant fertility is observable in the grain: though there is a settled season for the grand harvest, yet

reaping and sowing are often carried on at the same time. This country is intersected by innumerable torrents and *rivers*, most of which flow into the Amazon; and there are many valuable quarries of stone, and *mines* of metals and minerals.

Within the province of Quito there are still some remains of ancient Peruvian monuments and architecture. On the plains are sepulchral tumuli of earth, sixty feet and upwards in height, in some of which treasures have been found. In one of the villages are the ruins of a circular temple, built of brick, and one hundred and forty feet in circumference; and north of *Tacunga* are the walls of a royal palace, constructed of stone, and neatly joined without cement. But from these and other ancient edifices, in different parts of the country, it appears that even the most important buildings of the incas were constructed without either regularity or design.

Quito, the capital of this province, is a bishop's see, and the seat of an university. It is a fortified and opulent manufacturing city, built on the rugged acclivity of the mountain Pichincha, and at an elevation of more than nine thousand feet above the level of the sea, from which it is about a hundred miles distant. Many of the streets are broad and handsome, but irregular and extremely uneven; and most of the houses are constructed of clay or unburnt bricks. The best houses are large, and have balconies toward the street, but none of them are more than one story high. Near the middle of the city is a magnificent square, which contains the cathedral, the episcopal palace, the town house, and palace of audience; and the principal streets terminate at the angles of this square. Quito has, at different times, suffered much from conflagrations; but, in particular, it was nearly burnt to the ground in 1764*.

* For a further account of Quito, see Ulloa's and Humboldt's Travels.

In the vicinity of this city are two spacious plains, both of which are covered with verdure, and embellished with cultivated fields, villages, farm-houses, and hamlets. These plains are environed by mountains, and overlooked by the summits of the two lofty volcanoes Cotopaxi and Pichincha.

The province of Quito, it has already been stated, is subject to destructive *earthquakes*. A tremendous convulsion of the earth, on the 4th of February, 1797, changed the whole aspect of the province. This, almost in an instant, destroyed thirty-five or forty thousand persons, and has changed the temperature of the atmosphere to a greater degree of cold than before. In the city of Quito little damage was sustained, but the subterraneous thunder, and the shocks, repeated every five or six hours, occasioned indescribable horror and dismay. On the ensuing day it was known that *Tacunga*, and various hamlets in its vicinity, were utterly destroyed. Near *Hambato* many mountains were split, and, by their sudden fall, occasioned an awful destruction of the human race. A town called *Quero*, and all its people, were buried in an instant by a cliff which fell upon it. Another town was overwhelmed by a stream of water and mud. The elegant town of *Riobamba* became a heap of wreck and desolation, and shortly afterwards totally disappeared. The peak of a mountain falling upon it, filled up two rivers that passed by, and thus for a considerable time formed a lake, so that even the ruins of the town were not visible. Of nine thousand inhabitants only about four hundred escaped. The effects of this earthquake were more or less experienced through an extent of country upwards of two hundred and fifty miles in length from north to south. Since this catastrophe, earthquakes are continually recurring; and in such shocks that it is considered probable all the higher ground is one vast volcano.

Across the mountains towards the south-east, and at the distance of about eighty miles from Quito, lies *Archidona*, formerly the residence of a governor, but

now an inconsiderable assemblage of wooden houses, containing three hundred inhabitants, who cultivate maize and plaintains; and about the same distance, south-west from Archidona, is *Tacunga*, or *Latacunga*. This is a regularly built town on the bank of the river, near the vast volcanic mountain of *Cotopaxi*. In the year 1699 Tacunga was destroyed by an earthquake. It was afterwards rebuilt, on a regular plan; and, by the great earthquake in 1797, was again totally demolished. The ruins of a temple of the sun are still extant in the neighbourhood.

Forty miles south of Tacunga is the site of the unfortunate town of *Riobamba*, the destruction of which by the same earthquake has been already stated. The circumjacent district is tolerably fertile, well watered, and partially cultivated. Tempests are not so violent, nor is rain so frequent here as at Quito.

Westward of Riobamba is the district of *Guayaquil*, lying within the government of Quito, and extending about one hundred miles inland from a large bay of the same name. It is a low territory of hot and moist temperature, watered by several rivers, extremely fertile, but subject to inundations during winter. Its woods are infested with insects and noxious animals. The capital, called also *Guayaquil*, stands on a declivity about ten miles from the sea, consists of a range of long and narrow streets, and is defended by several forts. It is divided into what are called the Old and the New Town, which together consist of about two thousand houses, built of brick, earth, timber, and split bamboos. They are joined by a wooden bridge; and the river which passes through them is navigable, and bordered with trees, country seats, and cottages, but is full of alligators. The environs are low, swampy, and unhealthy. Guayaquil is a trading town, and the chief article of traffic is cocoa. The road from this place to Quito lies partly through a boggy tract, partly along the banks of a river, and partly among mountains, rocks, and precipices. The *Bay of Guayaquil* is very

extensive, and contains several islands. There is good anchorage for ships of burthen, opposite to the town, at the distance of about a league from the mouth of the river*.

Cuenza is a considerable town, ninety miles south-east of Guayaquil. It is the capital of a district of the same name, and is situated in a fertile plain about eighteen miles in length. This place was founded by the Spaniards in the year 1557, and is now supposed to contain about twenty-five thousand inhabitants. The streets are straight, and of convenient breadth; and the houses are built of unburnt bricks, and covered with tiles. They are tolerably regular in appearance, but many of them are only one story high. Those of the suburbs, which are chiefly inhabited by Indians, are mean and irregular. There are in this place several convents, two nunneries, and a college of Jesuits. The adjacent country is finely interspersed with farm-houses, and plantations of sugar-canes. Some parts are cultivated for corn, and others are appropriated to the feeding of sheep and horned cattle. From the milk of the latter the inhabitants make great quantities of cheese. Cuenza is supplied with water by several streams, and from its admirable situation, and the fertility of the adjacent soil, it might be rendered the paradise of Peru; but its advantages, either through ignorance or indolence, are not duly improved. The inhabitants in general are indolent; and the common people are rude, vindictive, and profligate. Most of the women, however, are industrious. They spin and weave baizes, that are famous, in every part of Peru, for the excellence of their quality and the brilliance of their colour. In the environs of Cuenza there are mines of silver, quicksilver, and iron, but none of them are worked.

The last town that I shall mention within the govern-

* For a further account of Guayaquil, see Ulloa's Travels.

ment of Quito, is *Loxa* or *Loja*. It is about seventy miles south of Cuenza, and situated in a pleasant and extensive valley, about seven thousand feet above the level of the sea. In its general form, and in the appearance of its buildings, this place somewhat resembles Cuenza; but the temperature of the air is considerably hotter. It has two churches and several convents, a nunnery, and a college of Jesuits. The number of inhabitants is about ten thousand. They manufacture a kind of carpets for which they find a ready sale; and they derive a considerable profit from a trade in cochineal.

Truxillo

Lies south-west and south of the government of Quito, and extends from three degrees and a half as far as nine degrees of south latitude. It is divided into districts that are diversified by mountains, forests, plains, and valleys.

The most northerly town of this province is *Tumbez*, situated in a sandy plain on the bank of a river of the same name, that falls into the bay of Guayaquil. This is the place where, in 1526, the Spaniards landed under the command of Don Francisco Pizarro. Before the conquest of Peru it was a flourishing town; but now its houses are few in number, built of reeds, and scattered irregularly about. At Tumbez the heat is excessive, nor is there any rain for several years successively; but, when rain begins to fall, it generally continues during the whole winter. Along the banks of the river, corn, fruit, and vegetables of numerous kinds, grow in great abundance and luxuriance. Cattle also are very abundant. Most of the inhabitants of the adjacent country apply themselves to the breeding of goats, for which there is a good market at Lima, Quito, and Panama.

If from Tumbez we proceed, in a south-westerly direction, for about a hundred and twenty miles, we arrive

at *Payta*, a small town founded by Pizarro in the year 1531. Its houses, except that of the governor, which is built of stone, are constructed of split canes and mud covered with leaves, and are only one story high. The situation of Payta is in a sandy, clayey, and barren soil. No rain ever falls here, and there is no river; hence the inhabitants are obliged to send to the distance of more than ten miles for nearly all the water they consume. This town is wholly indebted for support to its harbour, which affords a safe and commodious anchorage for shipping. It has often been taken by the English, particularly in 1741, when it was pillaged and burnt by the seamen and marines in a squadron of ships commanded by commodore Anson*.

About two hundred and forty miles south-east from Payta is *Caxamarca*, an irregularly built inland town, in the midst of an open and fertile plain, that yields prodigious crops of barley, though at the elevation of nearly nine thousand four hundred feet above the ocean. This was formerly a royal city, where the Peruvian emperor Atahualpa was put to death, after having been defeated and imprisoned by Pizarro. Here the incas had a palace, with a temple of the sun, baths, and other royal structures. The Indians of the vicinity manufacture a species of cotton cloth for sails, and for covers of pavilions and beds.

Truxillo, the capital of the province, is a tolerably well built, walled, and trading town, about ninety miles south-east of Caxamarca. It contains about eight thousand inhabitants, and is situated in a pleasant and fertile valley of the river Chimo, and about half a league from the coast. The houses are low, environed by gardens, and shaded with trees. The harbour is exposed to all winds; and a great surf runs upon the shore.

* An account of this enterprize is inserted in "Biographical Conversations on Eminent Voyagers," p. 171.

Lima.

This province extends along the coast southward of Truxillo. Its climate and soil are various. In some parts the heat is intense; and in others the cold is insupportable: in the neighbourhood of the capital, where rain never falls, the weather is always temperate. During winter the maritime tracts are refreshed and fertilized by thick fogs, which supply the want of rain; and in summer the heat is moderated by gentle breezes from the south. The mountainous parts are subject to violent rains, and to storms of thunder and lightning; and the plains are frequently convulsed by tremendous earthquakes.

Lima, the capital not only of the province, but of the government of Peru, is a large, opulent, and trading city, which stands about two leagues from the sea, and in twelve degrees, two minutes, south latitude. It was founded in the year 1535, in a spacious and delightful valley called Rimac, from an image of that name which was formerly worshipped there by the Peruvians. This valley is intersected by a *river*, which passes the walls of the city, and has over it an elegant and spacious stone bridge, of five arches, with a gate of beautiful architecture, which forms the entrance into Lima, and leads to the grand square. Lima is of triangular form, and surrounded by brick walls; and, on the side next the river, is more than two miles in length. The *streets* are wide, and intersect each other at right angles. The grand square is large and handsome. It is surrounded by superb edifices, and has in the middle a beautiful fountain of bronze, surmounted by a statue of Fame. The *houses* are in general built of wood, and low, on account of the frequency of earthquakes, but they are highly ornamented.

This city is divided into four quarters; and is said to contain, in the whole, more than three hundred and fifty streets. In 1720 it had eight parish churches,

three colleges, twenty-eight monasteries, thirteen nunneries, nine hospitals, and sixty-four thousand inhabitants; and it now contains a cathedral, a palace for the viceroy, several churches, and other public edifices, and about fifty-eight thousand *inhabitants*, of which somewhat more than one-third are Spaniards. All, from the highest to the lowest, are fond of fine clothes, and indulge their passion for these to a great excess. The women's dress consists of a chemise, a petticoat of dimity, an open petticoat, and a jacket, which in summer is of linen, and in winter of stuff; to which some add a short garment, called a mantelette. Women of the lowest condition, whose whole stock of apparel consists, perhaps, of a couple of chemises and a petticoat, wear about their necks and arms bracelets, rosaries, and small gold images. The females of Lima are in general of middling stature; and have handsome faces, fair complexions, and brilliant eyes. They are sprightly, jocose, though without levity, and remarkably fond of music. The men on the contrary are inclined to indolence. Luxury here prevails to a great degree. The public places are crowded with handsome carriages of various kinds, yet the amusements are few. One of the most favourite amusements is cock-fighting, on Sundays and festivals. Literature is entirely neglected.

Much of the magnificence and splendour of Lima is owing to its being the residence of the Viceroy, and the seat of the chief ecclesiastical and civil tribunals. The adjacent country supplies it with provisions at a tolerably reasonable rate, and with a great variety of delicious fruits; and the river and coast with fish, and shell-fish of various kinds. The wines at Lima are of different sorts, white, red, and dark red, and of each sort some are peculiarly excellent. Many of them are imported from other parts of the American coast. Much of the gold and silver, obtained from mines in the adjacent districts, is brought to Lima. In the year 1790, a sum, equal in value to £.91120 sterling, in gold and silver, was coined here; but the trade in the precious

metals has of late very much declined. There are no manufactories in this place, and its chief commerce is with the coast towns to the north and south of it.

Lima is about six miles from the Pacific Ocean. Its port is called *Callao*, near which there is an excellent harbour; and a wide and fine road, almost like a terrace walk, connects the two places. Callao is a town or village containing several public buildings and four or five hundred inhabitants. Every Monday in the year it has a fair, at which goods from most parts of the world are sold to the traders of Lima and other places.

Though Lima is situated in twelve degrees two minutes of south latitude, its climate is healthy and pleasant. It is, however, remarkable that no rain falls during the whole year, the ground being watered only by heavy dews. There are four *seasons*. Spring begins toward the end of November: at this season the vapours which filled the atmosphere in the winter subside: the sun again appears, and the country which, during the absence of his rays, had continued in a state of languor, begins to revive. This is succeeded by summer, which, though hot, is far from being insupportable: the heat would be excessive were it not moderated by the south winds that always blow at this season. Towards the end of June the autumn begins; and this is followed by the rainy season, called winter. The sun is now overcast, and the days are melancholy and disagreeable. It is in this season only that the vapours dissolve into a very small mist or dew, which everywhere moistens equally the earth, and renders even the most arid and barren lands fertile.

The beauty of the situation, the fertility of the soil, the general mildness of the climate and the riches of the inhabitants of Lima are not, however, sufficient to compensate for the continual dangers with which they are menaced from *earthquakes*. The place has been injured by these no fewer than sixteen times. The last earthquake was in the month of October, 1746. By this three fourths of the city were destroyed, and the port of

Callao was entirely demolished. The sea, as is common on similar occasions, receded to a great distance from the shore, but almost immediately returned, and engulphed the whole place. Of the inhabitants of Callao, four thousand in number, only about two hundred escaped. It is said that the concussions were repeated two hundred times in twenty-four hours, and four hundred and twenty-one times in the course of four months. A gentleman who was at Lima, in the ensuing year, says that a new village had then been commenced at Callao, and that several storehouses, for the convenience of commerce had been completed: that a new fort had been begun instead of the ruined one destroyed by the sea. In Lima this gentleman asserts, that nothing escaped the earthquake except a Franciscan convent and seven or eight houses. The streets had been exactly straight, but when he first arrived they were so choked up with the ruins of houses, that carriages could not pass along them. Before his departure, however, a passage was cleared, and several of the houses were rebuilt. The ruins of the churches, and especially of the cathedral, showed them to have been no mean buildings. The bridge, and the fountain in the grand square, had escaped the general ruin. The inhabitants were so fond of painting, that both the outside and inside of their houses were, in many instances, covered with landscapes and historical pieces.

This writer states, that delightful as the climate of Lima in general is, a residence here is unpleasant to strangers, as it is impossible to move out of doors without being almost blinded by dust. And what renders it still more unpleasant, these clouds of dust contain multitudes of insects, particularly what are called chigoes. These are much smaller than fleas, and usually insinuate themselves into the feet, where, if they be not soon extracted by the point of a needle, or by scissars, they create very painful sores. The houses swarm so excessively with fleas and musquitoes, that nothing can render them tolerable.

There are not now left in the vicinity of Lima many monuments of antiquity. The only remains of the labours of the ancient Peruvians are some sepulchres, and some walls built on the sides of the highways*.

Guamanga,

is another province of Peru. It lies eastward of Lima, and is of considerable extent. The climate of Guamanga is temperate, and the soil tolerably fertile; but it is chiefly noted for the mines of gold, silver, quicksilver, and copper, with which it abounds. In the year 1791, there wrought in this province, sixty mines of gold, one hundred and two of silver, and one of quicksilver; but several of these have since been abandoned.

The quicksilver mine is near *Guancaveliea*, a town, about one hundred and forty miles south-east from Lima. This town stands in an opening of the Andes, and is one of the largest and richest in Peru. The climate is very cold, and the weather changeable; and sometimes it rains and freezes on the same day, with tempests of thunder, lightening, and hail. This may be accounted for by its situation among the mountains, at an elevation of more than a mile and a half in perpendicular height above the level of the sea. The quicksilver mine was first discovered in 1563. In 1760 many of the works were destroyed by a fire, and the mine has since been much neglected. Its circumference is stated to have been three hundred and fifty yards, and its depth nine hundred and sixty.

Guamänga, the capital of the district, is a city about twenty miles south of Guancaveliea, containing a cathedral, an university, several convents, and other public buildings. Its buildings are of stone, and considered to be superior to any in Peru; and the gardens, squares, and entrances, are beautifully decorated with trees and verdure. There are three parish churches,

* See a further Account of Lima in Helms' Travels.

one for Spaniards, and two for Indians. Guamanga is a place of some trade, and the chief articles of traffic are leather, grain, and fruit. On the bank of a river not far distant, are the ruins of an ancient Indian palace.

Cusco, or Cuzco,

lies between eleven and sixteen degrees of south latitude, and is a country varied by mountains, valleys, and plains. Some of these are barren, and others fertile and abundant in grain and fruit. They contain several mines of the precious metals.

The capital is situated in the interior, on the banks of a river, and about two hundred miles from the sea. This was the residence of the ancient Peruvian monarchs, and was the only place that had the appearance of a city, when the Spaniards invaded the dominions of the Incas. On their arrival in these parts of America, they were astonished at the magnificence and splendour of this city, and particularly of the Temple of the Sun, and other public edifices. The houses, almost all built of stone, were constructed in regular order, and divided into the upper and lower towns. On a hill, north of the city, stood a fortress, which had a subterraneous communication with three forts in the town; and the design was to inclose the whole mountain with a stone wall of such vast dimensions as to render the ascent of it impracticable to an enemy. The internal works of the fortress are in ruins, but the outer walls are yet standing.

The present city of Cusco is nearly equal in extent to that of Lima. It may be called the inland metropolis of Peru, whilst Lima may be considered its maritime capital. Proudly situated in the midst of the Andes, Cusco still retains a majestic appearance. It is well built, on the declivity of several mountains, and in a pleasant and healthy situation. It contains a grand cathedral, and many colleges and other public buildings.

Most of the houses are constructed of stone, and covered with red tiles. Their apartments are spacious and finely decorated: the mouldings of the doors are gilded, and the other ornaments and furniture correspond with the elegance of the buildings and the taste of the inhabitants. Its population is said to consist of three or four thousand Spaniards, about twelve thousand Indians, and many negro slaves. The Indians are described to be very industrious in the manufacture of baize, cotton, and leather; and to have considerable taste for painting.

A valley adjacent to this city is extremely fertile, and, during the time of the Incas, was accounted the most delightful spot in the empire. On the south there is a small plain, ornamented with many beautiful walks. Two great roads anciently extended from Cusco, north-west to Quito, above fifteen hundred miles. One of these was conducted through a mountainous country, and the other along the plains on the sea-coast. The descriptions of these roads have, however, been much exaggerated. Their breadth did not exceed fifteen feet, and in many places they were so slightly formed, that no vestiges of them remain. In the low country, the path or route was merely marked by rows of trees, or by posts fixed at certain distances; but in the hilly region, eminences were levelled, low places filled up, bridges laid across the hollows formed by the rapidity of torrents, and storehouses were erected for the accommodation of travellers.

Charcas, or La Plata.

The province of *Los Charcas* includes a vast extent of country, consisting of deserts, impenetrable forests, plains intercepted by stupendous ridges of the cordilleras, and deep valleys. This province is equal in extent to that of Lima, but it is by no means so populous. Its eastern boundary is Brazil, and on the west it

reaches to the Pacific Ocean. Its principal towns are Potosi and Chuquisaca, or La Plata.

Potosi is a well built city, on an eminence, in twenty degrees twenty-one minutes of south latitude, and about one hundred and eighty miles from the ocean. The district in which it stands is mountainous, cold, and barren. The summits of the mountains are covered with perpetual snow; but the lower parts yield a scanty supply of vegetation for the food of sheep and vicunas, a small species of animals of the camel tribe, which are here used in carrying burthens, and the wool or hair of which is of a fine and silky texture. Potosi is a place of considerable celebrity, on account of the numerous and valuable *silver mines* in its vicinity. The origin of these is stated to have been accidental. In the year 1545, an Indian was pursuing some wild goats to the mountain of Potosi, when, arriving at a very steep part, he laid hold of a small shrub, in order to ascend with greater security; but the shrub giving way, was torn up by the roots, and discovered beneath it a mass of silver. On further examination, the Indian found some lumps of the same metal among the clods which adhered to the roots. For a little while he kept the discovery secret, and applied the silver which he collected to his own use. His resources were, however, at length made known, and the mine was worked without delay, and with so much advantage that, for a long time, it is said to have weekly produced silver to the value of near forty thousand dollars. The mountain in which this silver was found, consists of a yellowish kind of clay slate. It is about twenty miles in circumference, three thousand eight hundred feet high, and is now perforated by more than three hundred shafts or pits. It is wholly destitute of vegetation, in consequence of the numerous furnaces that are employed upon it; and these in the night form a grand and singular spectacle. The veins of silver were at first so near the surface, that the ore was easily

extracted; and this was so rich that it was refined with little trouble, and at small expense. For about thirty years the simple mode of refining by fusion was adopted; but, since that period, mercury or quicksilver has been used in the operation. An hundred and twenty mills were formerly employed; but the produce of the mines has of late been greatly diminished.

The town and vicinity of Potosi are stated to have once contained about one hundred and sixty thousand inhabitants; but they do not now contain more than twenty-five thousand. This place contains numerous convents and churches, and is styled, by Spanish writers, an imperial city. It is the residence of a corregidor, and contains a tribunal of finance. Its commerce was formerly of greater importance than that of Lima; and consisted in the exchange of ingots of silver for various articles of foreign produce*.

About sixty miles north-east from Potosi is *Chuquisaca*, or *La Plata*. This place was founded on the ruins of an Indian town, and near one of the sources of a river of the same name. It is a well built place, an archiepiscopal see, and the seat of an audience, an inquisition, and an university; and contains a cathedral and several churches. The plain on which it stands is ornamented with gardens and orchards, and bounded by mountains. Chuquisaca at one period contained about fourteen thousand inhabitants; but the mines have, of late years, been abandoned, and the population has been much diminished. During the summer, the heat of this part of America is not very great.

Tucuman.

From Charcas we enter, on the south, the province of *Tucuman*. This is an extensive district, the climate of which, except in the environs of the marshes and

* For a further account of Potosi, see Helms' Travels.

lakes, is mild and healthy. The weather is here cold and dry in winter; the spring is announced by violent rains; and the heat of summer is great and sudden. In those parts of the country where the plains are fertilized by rivers, the country is covered with excellent pasturage, adapted to the feeding of oxen, sheep, and other animals. Game is so abundant that it is to be met with at almost every step, and may even be caught with the hand. Maize, vines, cotton, and indigo, are cultivated with great success; and some of the forests contain immense quantities of bees. There are in Tucuman two mines of gold, one of silver, two of copper, and two of lead. The inhabitants manufacture cotton and woollen stuffs; and a valuable mine of rock-salt has lately been discovered. It is said, that on a moderate calculation, this immense province, in which the productions of every country might be naturalized, is capable of supporting in abundance a population of twenty millions, though, at present, it does not contain more than a twentieth part of this number*.

About two hundred and forty miles south of Potosi, is a small town called *Yujui*, or *Jujui*, containing about three hundred inhabitants. The vicinity of this town is noted for a singular volcano, from which the winds rush forth every morning with great noise and violence.

South of Yujui, and distant about forty miles, is *Salta*, an open town, in a fenny situation. This place does not contain more than two thousand inhabitants, yet it is of considerable importance, on account of its extensive trade in mules, but particularly for its great annual fair, which is held every year, in the months of February and March, and which attracts an extraordinary number of strangers. At this period there are often assembled in an adjacent valley, as many as sixty thousand mules and four thousand horses. This

* See Helms' Travels.

fair would probably be more extensively attended than it is, were it not held during the rainy months, when the whole neighbourhood is scarcely better than a vast morass. At this period there are numerous strangers, who are obliged to take up a temporary residence on the exterior of the town, and yet who can scarcely find a dry spot of ground on which to erect their tents*.

The capital of Tucuman is *St. Jago del Estero*, an open and inconsiderable city, on the western bank of the navigable river Dolce, which loses itself in an extensive lake. This city stands on a flat, dry, and sandy soil, and is environed by forests. There are, however, a few open spots, that are frequently overflowed by the Dolce; and some extensive plains, that yield abundant crops of maize, Indian wheat, cotton, and fruit.

Cordova.

South of Tucuman is the province of *Cordova*, about one hundred leagues in length, and seventy in breadth, intersected by many mountainous ridges, and watered by several rivers. This district contains few villages, is thinly inhabited, partially cultivated, and little known.

Its capital, the name also of which is *Cordova*, is a small but neat trading town, about two hundred miles south-west of St. Jago, and built in a wood, on a sandy and unwholesome plain, under a lofty mountain. It is of square form, and contains many good and strong houses, with elevated roofs. Cordova is the see of a bishop, and contains a cathedral, but this, from a want of symmetry in the towers, is an irregular building. There are also three convents and two colleges. Few places of equal extent with this, can display equal wealth; for all the inhabitants, Spaniards, as well as creoles, are noted for activity and industry. The chief

* See Helms' Travels.

trade of Cordova is in mules, which are brought from the southern provinces, and sold at Salta. Provisions are here very cheap. The environs yield grain and excellent pastures; and animal food of various kinds is to be had in great abundance *.

Sixteenth Day's Instruction.

PERU CONTINUED.

I WILL now read to you an account of the adventures of two eminent travellers, Don George Juan and Don Antonio de Ulloa, who were engaged in philosophical investigations in this part of America, between the years 1736 and 1746. They had been commissioned by the Spanish government to measure the degrees upon the equator, with a view towards ascertaining the true form of the globe. And an account of their arduous and indefatigable labours, will not only furnish you with some important geographical information, but will, I think, excite no inconsiderable degree of interest for the travellers themselves.

Narrative of the Travels in Peru of DON GEORGE JUAN *and* DON ANTONIO DE ULLOA.

THESE gentlemen arrived at Carthagena in the month of July, 1735. They thence proceeded first to Porto Bello, and afterwards, across the isthmus of Darien, to Panama. From the latter place they embarked on the 22d of February, 1736, for *Guayaquil*, and were landed on the shore of that bay.

---

* See Helms' Travels.

Shortly after their arrival the corregidor, or principal officer of Guayaquil, at their request, issued orders that carriages should be furnished to convey them toward the mountains. The passage thither was, however, at that time impracticable, as the winter had just closed, the roads were extremely bad, and many of the rivers had overflowed their banks.

At Guayaquil the winter commences in December, and lasts till April or May. During this season the elements, the insects, and vermin, seem to unite in annoying and incommoding the human species. The heat is very great: the rains continue day and night, and are accompanied by frequent and dreadful tempests of thunder and lightening: the river, which flows into the bay, and all those that join it, overflow their banks, and lay a great part of the country under water; and serpents, scorpions, and centipedes, during this season, crawl in great numbers into the houses. These are not, indeed, freed from them during any part of the year, but in the rainy season they are more infested by them than at any other. Hence it is always necessary to examine carefully the bed before any one goes to sleep, in order to ascertain whether some noxious animal may not have found its way thither. Musquitoes and other insects are seen in swarms; and all persons, even the negro slaves and Indians, have their beds defended by a kind of curtains, which these insects are unable to penetrate. So great is the number of insects which infest this country, that if, at night, a candle were left burning in the open air, the light would almost instantaneously be extinguished by their flying into it. Another inconvenience at Guayaquil arises from the myriads of rats with which the houses are infested. When night comes on, these quit their holes, and make so much noise in running along the ceiling of the apartments, clambering up and down the sides of the rooms, and over the canopies of the beds, that they disturb the rest of all persons who are not accustomed to them. So little fearful are they of man-

kind, that, if a candle were to be set down, without being in a lantern, they would immediately carry it off. Hence it is requisite to take the utmost care lest, by want of caution, the houses should be set on fire. All these inconveniences render Guayaquil a place almost insupportable to strangers. In this country the least troublesome season is the summer, as then both the number and the activity of every species of vermin are much diminished; and the heat is moderated by south-westerly breezes, which constantly begin about noon, and continue to refresh the earth till five or six o'clock the following morning. During this season, the sky is always serene and bright. Provisions are here in great abundance; and fruits, especially melons and water melons, are very common.

On the 3d of May the travellers proceeded up the river towards *Caracol*, but, in consequence of the opposition of the currents, they did not arrive at that place till more than a week afterwards. The tortures they sustained from the musquitoes in their progress were almost beyond endurance. During the whole day they were incessantly in motion, endeavouring to keep off these insects: and at night their torments were excessive. Their gloves, in some degree, defended their hands, but their faces were exposed, and their clothes were not a sufficient defence for the rest of their bodies, for the stings of the insects penetrated even through the cloth. Their whole appearance became excessively disfigured, and their bodies, in nearly all parts, were covered with painful and tormenting tumours.

Mules had been ordered to meet them at Caracol. These arrived; and, on the 14th of May, the travellers set out on their journey towards Quito. After having proceeded four leagues, through savannas and woods of plantain, and cacao or chocolate-nut trees, they reached the river *Ojibar*, and continued their journey, during the whole day, along its banks. Its course was so winding, that they had to ford it nine

times, though with no small danger from its rapidity, breadth, depth, and rocky bottom.

The travellers took up their abode for the night, in an unoccupied house near the river. It seemed to be only an immense nest of musquitoes. Some persons of the party thought they might be able to escape the torture of these insects, by stripping themselves, going into the river, and keeping only their heads above water. But the face, being the only part exposed, was immediately covered with them. Consequently, such as had recourse to this expedient, were compelled to deliver up their whole body to these tormentors.

On the 15th they continued their journey through a thick forest, the termination of which brought them once more to the banks of the river. This they again forded four times, and, about five o'clock the same evening, they halted at an Indian settlement on the bank of the river. They did not here find any house to lodge in; but this defect was soon supplied by the dexterity of the Indians, who, running into the woods, soon returned with branches and leaves of palm trees; and with these, in the course of an hour, they erected several huts, large enough to accommodate the whole company.

On the ensuing day the travellers passed a beautiful cataract. The rock from which the water fell was nearly perpendicular, and one hundred and seventy feet in height, and was on each side bordered by lofty and spreading trees. From the foot of the rock, the water continued its course in a bed along a gentle descent, and was crossed by the road. The travellers twice afterwards crossed the river, below the cataract, on bridges, but not without great danger; for these structures are formed of wood, are very long, and shake much when passed over: their breadth is not more than seven or eight feet, and they are without any rail, so that a single false step would precipitate both the mule and his rider into the torrent beneath. Their

journey this day was extremely fatiguing. The road, in some places, extended along the edge of dreadful precipices, and, in others, was so narrow as scarcely to afford a passage for the mules.

They now ascended the mountains; and, having, for some time, been accustomed to a hot climate, they sensibly felt the cold. It is remarkable, observes Don Antonio, to see the effects of two opposite temperatures in persons who here happen to meet. Those coming from Guayaquil, find the heat so excessive that they are scarcely able to bear any clothes; whilst persons proceeding in an opposite direction, wrap themselves up in all the garments they can procure. One party is so much delighted with the warmth of the river, that he bathes in it; the other thinks it so cold, that he avoids even being sprinkled by the water. Nor is the case very different in the same person, who, after a journey to the mountains, is returning to Guayaquil; or the contrary, provided the journey and the return be made in the same season of the year. This sensible difference proceeds from the change naturally felt at leaving a climate to which a person has been accustomed, and entering another of opposite temperature.

In the mountains the road was excessively rugged and bad; and the trouble and inconvenience which the travellers here experienced, and the dangers to which they were exposed, were very great. In some parts the acclivity was so steep, that the mules could scarcely keep their footing. The paths also were full of deep holes. The descent from these heights was not less difficult and dangerous than the ascent. The mules themselves are sensible of the caution that is requisite, for, when they come to an eminence, they stop, and, having placed their fore-feet together, they draw their hind feet up to them, as if they were about to lie down. In this attitude, having taken a survey of the road, they slide along with almost the swiftness of a meteor. All that the rider has to do is to keep himself firm on

the saddle, without checking his beast; for the least motion would destroy the equilibrium of the mule, and, in this case, both himself and the rider might be dashed to pieces. Some mules, after having been long used to travel among the mountains, acquire a kind of reputation for their skill and safety, and accordingly are highly valued.

The worst seasons for these journeys are the beginnings of summer and winter; for then the rains cause such dreadful torrents that, in some places, the roads are covered with water, and in others, they are so much damaged, that there is no possibility of passing till they have been mended.

When the travellers had reached the heights of the first range of mountains, they descended toward the town of *Chimbo;* and, at the distance of about a league from that place, they were met by the corregidor, the priest, and some of the principal inhabitants, accompanied by a troop of Indian boys. Each of the latter was dressed in blue, and girded round the waist with a sash. On their heads they wore a kind of turban, and in their hands they carried flags. This little corps was divided into two or three companies, and went before the travellers, dancing and singing some words, in their language, expressive of the pleasure they received, from the safe arrival of such persons in their country. In this manner the cavalcade entered the town; and immediately afterwards all the bells in the churches were rung, and every house resounded with the noise of trumpets, tabors, and pipes. On the travellers expressing to the corregidor their surprise at this reception, which was a compliment far above their rank, they were informed, that it was not at all singular, for that it was commonly practised when persons of unusual consequence entered the town.

After they had passed Chimbo, the travellers entered an elevated plain, which, as far as the eye could reach, was covered with fields of wheat, barley, maize, and other

grain. The verdure of this plain, wholly different from the mountain scenery they had recently passed, gave them great pleasure. For nearly twelve months they had seen only the productions of hot and moist countries; but the productions now before them, so nearly resembled those of Europe, as to excite in their minds a pleasing recollection of their native soil.

On the 22d they began to cross the desert of *Chimborazo*. They left the mountain of that name on the left, and proceeded over different eminences of such elevation, that they suffered much inconvenience from the cold. On the ensuing morning, before six o'clock, the thermometer was at the freezing point, and the whole country was covered with hoar frost. They had slept in a cavern among the rocks, and at nine o'clock again set out, keeping along the side of Chimborazo. About noon of the 24th, they reached the town of *Hambato*, after having passed several torrents, ravines, and chasms in a mountain north of Chimborazo, and, like that, covered with snow. Among these chasms was one, about twelve feet deep, which had been occasioned by an earthquake.

They crossed another plain on the 28th, and here saw an ancient structure that had belonged to the Indians; a palace of one of the Incas, or princes of the country. After several other ascents, they reached a muddy plain; at the extremity of which, on a considerable elevation, stood the city of *Quito*, where they arrived at five o'clock in the afternoon of the 29th.

The president of the province, Don Dionesio de Herrera, not only provided lodgings for the travellers in the palace of the audience, but entertained them for three days with great splendour. During this time, they were visited by the bishop, the auditors, canons, regidores, and various persons of distinction, who seemed to vie with each other in civilities towards them.

The mountains that form the chain of Andes, which

the travellers had just passed, were covered with vast forests on the west side, but on the east were entirely naked. Among these mountains is the source of the river, which makes a grand appearance between Caracol and Guayaquil, and which is peculiarly advantageous to the commerce of this part of the country. In the woods there are great numbers of birds, particularly of wild peacocks, pheasants, and other kinds of game. They are also infested by serpents and monkeys, particularly a kind of monkeys, called marimondas, which are of black colour, and so large, as, when standing on their hind legs, to measure upwards of six feet in height.

The city of *Quito* stands on the eastern skirt of the western Cordillera of the Andes. On one side of it are mountains of stupendous height and magnitude, which have their summits covered with snow; and on the other are volcanos flaming within, whilst their summits, chasms, and apertures, are involved in ice. The plains are temperate; but the breaches of the mountains and the valleys are hot. Quito itself, though near the centre of the torrid zone, and within one degree of the equator, is so situated, that neither the heat nor the cold is troublesome. The difference of seasons is scarcely perceptible here. The mornings are cool, the remainder of the day is warm, and the nights are of an agreeable temperature. Hence the inhabitants make no difference in their dress through the whole year. The winds are healthy, and blow almost without cessation, yet never with violence.

Thus, if it were not for some inconveniences to to which this country is subject, it might be considered one of the most happy regions that exist. But when these are considered, all its beauties sink into obscurity. It is subject to the most dreadful and alarming tempests of thunder and lightening; and to frequent and destructive earthquakes, which often surprise the inhabitants in the midst of security. During the whole morning, and till one or two o'clock in the afternoon,

the weather is generally serene and delightful: but, afterwards, vapours rise, and the atmosphere becomes black with clouds. These bring on such tempests of thunder, that all the adjacent mountains seem to tremble, and the city itself often feels their dreadful effects. Lastly, the clouds discharge themselves in such impetuous torrents of rain, that in a short time the level streets sometimes appear almost like rivers; and the squares like lakes. This usually continues till near sun-set, when the weather clears up, and nature again assumes the beautiful aspect of the morning. Sometimes, indeed, the rains last all night, and they have been known to continue for three or four days successively. On the other hand, this course of tempestuous weather has its exceptions; and three, four, five, six, or even eight fine days are sometimes known to succeed each other.

There is at Quito little distinction between winter and summer. The interval betwixt the months of September and April, is here called the winter season; and the other months compose the summer. In the former season, the rain chiefly prevails; and in the latter, there are frequent intervals of fine weather; but whenever the rains are discontinued more than a fortnight, the inhabitants are in the utmost consternation, and public prayers are offered for their return. The rains are of the greatest possible benefit to the city, in cleansing the streets and squares; for these, by the filthiness of the common people, are every where in a most disgusting state.

Earthquakes, though they are not here so frequent as in some other cities of South America, yet they are far from being uncommon, and are sometimes very violent. While our travellers continued here two occurred, which threw down several country seats and farm-houses, and buried most of their inhabitants under the ruins.

During a few of the first days after the arrival of the travellers in Quito, their time was occupied in re-

turning civilities for those they had received. After this they began to deliberate on the best modes of performing the work they had undertaken, to measure a degree on the earth's surface near the equator. At Quito they were met by M. de la Condamine, and another gentleman, who had been commissioned by the court of France to assist in this operation.

Their first proceedure was to measure an extensive piece of ground, for the base of their work. This occupied all the remainder of the year, and proved a most fatiguing and difficult operation. They selected for the purpose a sandy plain, twelve miles north-east of Quito, and about eight hundred feet lower than that city. The weather was here less cold than at Quito, for, towards the east, this plain was defended by the lofty cordillera of *Guamani* and *Pambamarca*, and on the west by that of *Pichincha*. Towards the north and south it was quite open. Hence it was exposed to violent tempests of thunder, lightening, and rain; and also was subject to such dreadful whirlwinds, that sometimes the whole interval appeared to be filled by vast columns of sand, that were whirled round with extraordinary velocity.

The particulars of the operations of our travellers and their associates, it is unnecessary to relate. The better to effect the work they had undertaken, they separated into parties, one of which went to the mountain *Pambamarca*, and the other ascended the highest summit of *Pichincha*. Both parties suffered much inconvenience from the severity of the cold, and the impetuosity of the winds, which, on these heights, blow with almost incessant violence. Thus, even within the torrid zone, and nearly under the equator, where it was probable they would have had to experience the inconveniences of excessive heat, the greatest pain they felt was from the intenseness of the frost.

The first scheme which, in these miserable regions, they adopted for protecting themselves from the weather, was to pitch a field tent for each company. But, on

Pichincha, this was found to be impracticable. Don Antonio's party, which was on this mountain, was consequently obliged to content themselves with a hut, and that so small that they could scarcely all creep into it; and this hut was so situated, that it was almost incessantly covered with ice and snow.

The stupendous rock, near the summit of Pichincha, where the hut was erected, was so steep and craggy, that no mule could ascend it, and it could only be climbed on foot, and with great exertions. The manner in which the travellers lived in these elevated and desolate regions, may not perhaps be found unentertaining: a description of it will afford some idea of the fatigues, the hardships, and the dangers to which, for several weeks, they were exposed.

During much of the time they were here, they were compelled to keep within their hut, by the intenseness of the cold, the violence of the wind, and their being continually involved in so dense a fog that objects, at the distance of six or eight paces, were scarcely discernible. When the fog cleared away, the clouds descended beneath the place where they had taken up their abode, and on all sides surrounded the mountain. Here they seemed like the waves of the ocean, and the summit of the mountain resembled an island in the midst of them. Whenever the clouds thus descended, the travellers heard the tremendous roar of thunder storms, which discharged themselves on Quito and the adjacent country: they saw lightening issue from the clouds, and heard the thunder roll far beneath them. And, while the whole lower parts of the mountain were involved in tempests, the travellers enjoyed a delightful serenity: the wind was abated, the sky was clear, and the enlivening rays of the sun moderated the severity of the cold. Their sensations were very different when the clouds ascended. The density of the vapours rendered respiration difficult; snow and hail fell continually, and the wind returned with all its violence. The travellers were then in

incessant fear lest their hut might either be blown down the precipice, on the edge of which it was built, or might be buried under an accumulation of ice and snow. The violence of the wind frequently occasioned the most dreadful concussions, by throwing enormous fragments of rock down the precipice. These were the more alarming, particularly during the night, as no other noises were heard. The door of the hut was fastened with thongs of leather, and not the smallest crevice was left unstopped; but, notwithstanding every care, the wind penetrated through. Even in the day time, the density of the clouds was such, that all the light which could be had in the hut was from a lamp or two burnt within. Though it was small, and crowded with people, yet the cold was so intense that each person was obliged to have by him a chafing-dish of coals. These precautions would have rendered the climate supportable, had not the danger to which they were exposed of being blown down the precipice, compelled the travellers, every time it snowed, to encounter the severity of the external air, and to sally out with shovels for the purpose of freeing the roof from the masses of snow which fell upon it; nor, without this precaution, could it have been able to support the accumulated weight.

It may easily be imagined what the travellers suffered from the asperities of a climate like this. Their feet were swelled, and became so tender that they could not even bear the heat, and walking was attended with extreme pain. Their hands were covered with chilblains, and their lips were swelled and chopped, so that almost every motion, that even occasioned by speaking, drew blood. For some time they were compelled to observe a strict silence, and were but little disposed to laugh, for an extension of the lips produced fissures in them, that were extremely painful and very difficult to be healed.

The common food of the travellers in this inhospitable region, consisted only of a little rice, boiled

with meat, which they procured from Quito; and, instead of water from a spring or stream, their drink was obtained by melting the ice. In eating, every one was obliged to keep his plate over a chafing-dish of coals, to prevent his food from being frozen; and it was requisite to do the same with the water which they drank. At first they had imagined that the drinking of strong liquors would diffuse a heat through their body, and render it less susceptible of the painfulness of excessive cold; but they were surprised to find no strength in them, and that, in these regions, they afforded no greater preservative against the cold than water.

The travellers had great difficulty to keep the Indians they had brought with them together. These, on first experiencing the rigours of a mountain climate, to which they had hitherto been unaccustomed, began to think of deserting; and if intelligence of their intention had not been given by one of them more faithful and more persevering than the rest, the consequence might have proved fatal. The circumstances were these. On the top of the rock, which Don Antonio and his party occupied, there was no space for the Indians to have a tent pitched for them, they consequently every evening retired to a cave at the foot of the mountain, where the climate was much more tolerable than near the summit. Before they withdrew at night, it was usual for them to fasten, on the outside, the door of the hut in which the travellers slept; and as, every night, the hail and snow which fell, formed a barrier against the door, it was the business of one or two of the Indians to come up early in the morning, and remove this obstruction, that those who were within might open the door. After the travellers had been on the mountain four or five days, they were one morning not a little alarmed to find ten, eleven, and twelve o'clock pass, without any indication of the approach of the labourers. At length they were relieved by the Indian, who had withstood the seduction

of his countrymen, and who informed the travellers that his comrades had all deserted. With some difficulty this man opened a way for them to come out. After this they obtained from Quito a supply of Indians, who were relieved by others every four days.

Twenty-three days the travellers passed on the mountain of Pichincha, pursuing their operations of measuring, and making observations whenever the weather was sufficiently clear and free from vapours to admit of it. At length they found it necessary to erect signals, and proceed on operations in a lower situation and a more favourable region. Here they continued nearly three months longer, till December, when, having finished the observations which particularly concerned Pichincha, they proceeded to other stations; but with no abatement of inconveniences from cold and fatigue.

In all their stations, subsequent to that of Pichincha, each company lodged in a field tent, which, though small, was found less inconvenient than their hut on Pichincha. These tents they were under the necessity of constructing in the most conspicuous and consequently the most exposed situations, for the purpose of signals to the different parties employed. This was the occasion of great inconvenience and suffering to them, as they were thus incessantly exposed to wind, snow, frost, and cold. The inhabitants of the country beneath them, both Spaniards and natives, viewed the operations with the utmost astonishment; for they were accustomed to contemplate with inexpressible horror the places in which these foreigners passed so much of their time.

They were occupied in the deserts of Pambamarca and Pichincha, from the beginning of August, 1737, to the end of July, 1739. During this time the company of Don Antonio de Ulloa surveyed thirty-five deserts, and the other company thirty-two. In all these operations their inconveniences were similar, except that they became less sensible to them, in proportion as their bodies became inured to fatigue, and naturalized to the inclemencies of regions so elevated. After

awhile they were enabled to reconcile themselves to continual solitude and coarse provisions; and, at last, they encountered almost without concern such dangers as were unavoidable among the precipices which they frequented. The little cabins of the Indians, and even stalls for cattle in the lower parts of the mountains, were as acceptable to them as palaces; and villages now appeared in their eyes almost as large as cities had before done. The least of those objects, which from their residence in the solitudes of the deserts, they had of late been unaccustomed to see, became surprisingly magnified to their imaginations, whenever they descended, for two or three days, from the place of their exile.

The opinions of the neighbouring inhabitants respecting the enterprise of the strangers were various. Some admired their resolution, others could not tell what construction to put upon their perseverance; and even those of the best education, were utterly at a loss what to think concerning it. They examined the Indians relative to the life which the strangers led, but the answers they received tended only to increase their doubts and astonishment. The serenity in which the strangers lived in places which themselves contemplated with dread, was not unknown to them; and they saw with what tranquillity and perseverance these strangers passed from one scene of solitude and labour to another. All this appeared so extraordinary, that they were at a loss what to attribute it to. Some considered them as little better than lunatics: others imputed their proceedings to avarice, and believed that they were endeavouring, by methods of their own invention, to discover the precious metals: others suspected that they dealt in magic: but all were involved in a labyrinth of confusion with regard to their projects and operations. Even when informed of the real motive of the expedition, their ignorance totally prevented them from comprehending the nature of it.

Several amusing adventures were occasioned by the

strange notions which were entertained by the inhabitants of the country, respecting these strangers. In one instance, as they were passing to a station where they had placed a signal, they observed at a distance three or four Indians on their knees, and in the act of uttering something in their own language, with the greatest fervour and in the most suppliant tone. By the position of their eyes, it was evident that they were addressing themselves to the strangers. When Don Antonio came up, he several times made signs to them to rise, but these were of no avail, they still continued their posture even till the strangers had passed them to a considerable distance. Afterwards these men approached the tent, and, in a similar posture, recommenced their vociferations; and no signs that could be made would induce them to cease. At length, an Indian in company with Don Antonio, who understood both the Indian and Spanish languages, was directed to inquire what they wanted. The eldest of them, who was the father of the others, told him that his ass had strayed away or was stolen, and implored that he might be put into a method of recovering his beast. It was in vain the strangers declared, through their interpreter, that they had not the means of assisting them. The Indians could not be undeceived, and still continued on their knees, till finding that no further notice was taken of them they rose and retired.

In the month of December, 1739, Don Antonio and his party returned to *Quito*, where they were occupied till the 1st of August following, in preparing for their future operations. They then repaired to *Cuenza*. Here they commenced a new series of observations, which were finished about the end of September. Their subsequent operations, which are for the most part devoid of interest to a general reader, occupied nearly four years; and at length, when the whole were completed, they embarked for Europe on the 22d of October, 1744.

Seventeenth Day's Instruction.

PERU AND THE ADJACENT COUNTRIES.

I HAVE already related to you an account of the travels of Baron de Humboldt and his friend, M. Bonpland, in the eastern parts of Terra Firma, and of the their voyage down the river Apuré and up the Oronoko. These enterprising and intelligent travellers have displayed a resolution and perseverance which have not often been surpassed. Their ardour in pursuit of knowledge, and their zeal for the promotion of it, led them to encounter dangers and to overcome difficulties that might have proved fatal to persons less active, vigorous, and persevering than themselves. After they had left the Oronoko, they returned to Cumana. As some repose, however, was necessary to recruit their enfeebled strength, they proceeded to the island of Cuba, where they remained about three months. From this island they embarked for Carthagena, whence we will now accompany them in a journey southward, through Peru to Lima.

Norrative of a Journey of Messrs. HUMBOLDT *and* BONPLAND *from Carthagena, through Peru, to Lima.*

IT was in the early part of the year 1801 that these gentleman arrived at Carthagena. They thence proceeded through the woods of *Turbaco*, and up the banks of the fine river *Magdalena*, to the village of *Honda*. From this place, pursuing their journey still through forests, they shortly afterwards arrived at *Santa Fé de Bogota*, the capital of the province of New Granada, and situated on a beautiful plain, at an elevation of eight thousand seven hundred feet above the level of the sea. Every thing here was calculated to gratify the taste and transport the imagina-

tion. In the vicinity of this place the travellers visited some important mines. They also visited the natural bridge of *Icononžo*, composed of three fragments of rock disrupted by an earthquake; and the tremendous cataract of *Tequendama*, which falls from a height of six hundred feet, and presents one of the grandest spectacles that can be imagined.

They continued at Santa Fé till the month of September, when they set out for Quito. In their progress they crossed the Andes of *Quindiu*, a chain of mountains partly covered with snow, which lie between the towns of *Ibagué* and *Carthago*. The passage of these mountains is considered the most difficult of any in this part of the country. Their lower parts are covered with a thick uninhabited forest, which, in the finest season, cannot be traversed in less than ten or twelve days. Not even a hut is to be seen, nor can any means of subsistence be found. Travellers always furnish themselves with a month's provisions before they set out, as it sometimes happens that, by the melting of the snow, and the sudden swelling of the torrents, they are unable either to proceed or to retreat. The highest point of the road is about eleven thousand six hundred feet above the level of the sea; the pathway is extremely narrow, and has the appearance, in several places, of a gallery dug out, and left open to the sky.

In this part of the Andes, the rock is covered with a thick stratum of clay. The streamlets which flow down the mountains have hollowed out gullies eighteen or twenty feet deep, and sometimes more than a mile in length. Along these, which are generally covered at the bottom with mud, the traveller is forced to grope his passage, the darkness of which is increased by the thick vegetation that covers the opening above. Oxen, the beasts of burthen generally used in this country, can scarcely force their way through; and if the traveller chance to meet a drove of these animals, he has no means of avoiding them, but by climbing the

rocks, and there suspending himself by the roots of trees or shrubs, till they have passed.

Baron de Humboldt and his friend traversed the mountain of Quindiu in the month of October, 1801; and amidst a deluge of rain. They were on foot, and were followed by twelve oxen, which carried their collections and instruments. The road lay through a country full of bogs, and covered with bamboos; and, during their progress, their shoes being torn to pieces by prickles from the roots of the shrubs and trees, they were at last obliged to go barefooted. This circumstance, together with the continual humidity, the length of the passage, the muscular force required to tread in a thick and muddy clay, and the necessity of fording deep torrents of icy water, rendered the journey extremely fatiguing.

Few persons, in easy circumstances, travel on foot along these difficult roads. It is customary for such to be carried in chairs on the backs of men; and sometimes for fifteen or twenty days successively. Persons in this country speak of travelling on a man's back, as we mention going on horseback. No humiliating idea is annexed to the trade of "cargueroes," as these carriers are here called. The men who follow this occupation are chiefly mulattoes, but sometimes whites; and the recompence for the fatigue to which they are exposed, in a journey of eight or nine hours a day for fifteen and sometimes even twenty-five or thirty days, does not exceed fifty or sixty shillings sterling.

The mountain of Quindiu is not the only part of South America which is traversed on the backs of men. The whole province of *Antioquia* is surrounded by mountains so difficult of passage, that there are no other modes of travelling across them, than either thus or on foot. Baron de Humboldt saw an inhabitant of this province, who was so bulky that he had never seen but two mulattoes, who had been capable of carrying him; and it would have been impossible for

him to have returned home if his carriers had died while he was on the opposite side of the mountains.

In these climates the indolence of the whites is so great, that every director of a mine has, in his service, one or two Indians, who are called his horses. They are regularly saddled every morning, and support themselves by bending forward upon a short cane; and their employment is to carry their master from one part of the mine to another.

When the cargueroes prepare for a journey across the mountains, they pluck several hundred leaves of a plant of the banana family, called vijao. These, which are membraneous and silky, of an oval form, about twenty inches long, and fourteen in width, are used for the covering of temporary houses, formed in the woods. After the leaves are gathered, an incision is made in the middle rib, as a place by which to suspend them; and they are then carefully rolled up into a cylindrical bundle. When the travellers reach a spot in the forests where the ground is dry, and where they propose to pass the night, the cargueroes lop a few branches from the trees. With this slight timber-work they, in a short time, form a kind of tent, and spread over it the vijao leaves, like the tiles of a house. The huts, thus hastily constructed, are, in general, cool and commodious, and capable of resisting moisture. Messrs. Humboldt and Bonpland passed several days under one of these leafy tents, and were perfectly dry amidst violent and incessant rains.

The Andes of Quindiu are described by Baron de Humboldt, to be peculiarly rich in useful and interesting plants. They bear in profusion the storax, wax-palm, passion-flower, and bamboo. He and his friend were thirteen days in traversing them; after which, on the western side, they reached the town of *Carthago*, situated in a fine vale, watered by the river *Cauca*. Their shoes had been rotted off their feet, and they entered Carthago bare-footed, but enriched with a fine collec-

tion of new plants, of which the baron made a great number of drawings.

From Carthago they proceeded to *Popayan*, by way of *Buga;* crossing the beautiful vale of the Cauca, and having, on one side the mountain of *Choça*, in which are mines of platina. At Popayan they staid during the month of November; and from this place they visited some singular mountains of basalt and porphyry, and the volcanoes of *Puracé* and *Sotara*. On ascending, from Popayan toward the summit of Puracé, they found, at the elevation of nearly seven thousand seven hundred feet, a small plain, inhabited by Indians, and cultivated with the greatest care. The mouths of Puracé emit, with a dreadful noise, vapours of sulphurated water.

After they had left Popayan, they advanced, through some dangerous defiles of the mountains, to *Pasto*, a little town situated on a beautiful plain, and at the foot of a tremendous volcano, the summit of which is at all times covered with snow. They spent their Christmas at this town, and were entertained with great hospitality. The roads both to and from Pasto were excessively bad. The whole province is a frozen plain, so elevated as to be nearly beyond the point where vegetation can subsist; and it is surrounded by volcanoes and sulphur-pits, that continually emit volumes of smoke. The wretched inhabitants of these districts have little other food than potatoes; and, when these fail, they are obliged to go to the mountains to eat the stem of a peculiar kind of tree, called *Achupalla:* the bears of the Andes also feed upon it, and often dispute it with them.

In proceeding southward from Pasto, the travellers narrowly escaped being drowned, near the town of *Ibarra*, by a sudden swell of the water, accompanied with the shocks of an earthquake. On the 6th of January, 1802, they reached the city of *Quito**. Here

* For a description of Quito, see p. 209.

they obtained some repose from their fatigues, and enjoyed the pleasures of hospitality and retirement, surrounded by the grandest productions of nature. They remained about eight months in Quito, making different excursions to the neighbouring volcanoes, and the loftiest summits of the Andes.

Baron de Humboldt remarks, that, amidst the majestic and varied scenery of the Cordilleras, the valleys are what most powerfully affect the imagination of the European traveller; for the stupendous height of the mountains can be discerned only at a considerable distance, and from the low lands, which extend along the coasts. The elevated plains that encircle the summits of these mountains, covered with perpetual snow, are, for the most part, from eight to ten thousand feet above the level of the ocean. This height weakens, in some degree, the effect produced by the colossal masses of Chimborazo, Cotopaxi, and Antisana, as viewed from the lofty plains of Riobamba and Quito. On the contrary, the valleys of the Cordilleras, deeper and narrower than those of the Alps and Pyrenees, present scenes of the wildest aspect imaginable, and fill the soul with astonishment and terror. These valleys are crevices, the sides and bottom of which are clothed with luxuriant vegetation; and the depth, in many parts, is so great that were even Vesuvius to be seated in one of the abysses, its summit would not exceed the ridge of the nearest mountains.

Baron de Humboldt made three attempts, and twice succeeded, though at the imminent hazard of his life, in reaching the peak of the mountain *Pichincha*, 15.940 feet above the level of the sea. He was desirous of examining its crater. From the sides of this crater he observed, that there arose three pyramidal rocks: these were not, like other parts around the summit, covered with snow, for this had been melted by the heat of the vapours which continually issued from the mouth of the volcano. That he might be the better able to examine the bottom of the

crater, he laid down, and looked over the edge; and it is impossible, he says, for imagination to conceive a more dismal or terrifying picture than was here presented to his view. The mouth of the volcano formed a circular opening, nearly three miles in circumference, of which the rugged and perpendicular sides were covered with snow towards the top. The interior was of a deep black aspect; and so immense was the gulf, that he could distinguish the summits of several mountains contained within it. Their tops seemed to be twelve or fifteen hundred feet beneath the point where he lay; hence we may judge at what depth their base must be situated. Baron de Humboldt is of opinion, that the bottom of this crater is on a level with the city of Quito. M. de la Condamine is supposed to have been the only European who had before reached the summit of the Pichincha, and when he was there the volcano was extinct, and all its upper parts were covered with snow; but the baron, after his visit, had to report the unpleasant intelligence that it was burning.

The travellers next visited the volcano of *Antisana*, at the summit of which there is a crater, in the midst of perpetual snow, and at an elevation of 19.150 feet above the sea. In this excursion, when they were near the summit, the tenuity of the air was so great as to occasion the blood to issue from their lips, gums, and even their eyes: they became extremely feeble, and one of the company fainted.

Among the mountains covered with eternal snow, which surround the city of Quito, none is so beautiful nor so majestic as that of *Cayambé*. Its height is 19.200 feet, and its form that of a truncated cone; and its summit is traversed by the equator. This mountain never ceases to attract admiration at sun-set, when the volcano of Pichincha, situated to the west, throws its shadow over the vast plain beyond which Cayambé arises.

The loftiest of all the volcanoes of the Andes, which

of late years have undergone eruptions, is *Cotopaxi*, situated about twenty-five miles south-east from Quito. Its absolute height is 18.880 feet; and it consequently is about two thousand six hundred feet higher than Mount Vesuvius would be if it were placed on the top of the Peak of Teneriffe. Cotopaxi is the most dreadful volcano in the kingdom of Quito, and its explosions are frequent and disastrous. The mass of scoria, and the huge pieces of rock, thrown out from this volcano, which are spread over the neighbouring valleys, covering a surface of several square leagues, would alone, if heaped together, form a mountain. In 1738 the flames of Cotopaxi rose two thousand feet above the brink of the crater. [An eruption occurred in the year 1743, which was preceded, for some days, by a continued interior rumbling noise. After this an aperture was made at the summit, and three others near the middle of the declivity: in places which, previously to the eruption, had been buried under prodigious masses of snow. The ignited substances that were ejected, being mingled with a considerable quantity of ice and snow, melting amidst the flames, were carried down with such amazing rapidity, that the plain in which the town of *Tacunga* is situated was overflowed; and a great number of houses, with their wretched inhabitants, were swept away in one general and instantaneous destruction. During three days the volcano ejected cinders, while torrents of lava, with melted ice and snow, poured down the sides of the mountain. The eruption continued for several days longer. At length all was quiet, and neither smoke nor fire was to be seen, till the month of May, 1744, when the flames forced a passage through several other parts on the sides of the mountain. In clear nights, the flames, being reflected by the transparent ice, are said to have exhibited a grand and beautiful illumination. On the 13th of November following, this volcano emitted such prodigious quantities of fire and lava, as to occasion an inundation equal to the former; and the roarings of the mountain

were heard as far as Honda, a town on the borders of the Magdalena, two hundred leagues distant. On the 4th of April, 1768, so great a quantity of ashes was ejected by the mouth of the Cotopaxi, that, in the towns of *Hambato* and *Tucunga*, day did not break till three o'clock in the afternoon, and the inhabitants were obliged to use lanterns in walking along the streets. Another eruption took place in January, 1803, about twelve months after Baron de Humboldt was at Quito. This was preceded, as before, by the sudden melting of the snows that covered the mountain. For twenty years preceding this period, no smoke nor vapour had been perceived to issue from the crater; and, in one night, the subterraneous fire became so active, that, at sunrise next morning, the external walls of the cone, heated no doubt to a very considerable temperature, appeared naked and of dark colour. At the port of Guayaquil, distant fifty-two leagues in a direct line, the noises of this volcano were distinctly heard like continued discharges of a battery.]

Cotopaxi is the most regularly formed of all the colossal summits of the high Andes. It is a perfect cone, covered with an enormous layer of snow, which shines with dazzling splendour at the setting of the sun. The snow conceals from the eye of the observer even the smallest inequalities of the soil: no point of rock, no stony mass penetrates nor breaks the regularity of its shape. The crater, like that of the peak of Teneriffe, is surrounded by rocks that appear, when examined by a good telescope, somewhat like a low circular wall or parapet. It is extremely difficult for any person to reach the lower boundary of the perpetual snows. This difficulty was experienced by Messrs. Humboldt and Bonpland, in an excursion which they made in the month of May, 1802. They were unable to proceed any further than this; and Baron de Humboldt, after an examination of the summit, from this spot, pronounces that it is impossible for any person to reach the brink of the crater.

The travellers, after their excursion to the moun-

tains, returned to Quito, and thence proceeding on their journey southward, were accompanied by Don Carlos Montutar, son of the Marquis de Selva-alegre, a youth whose ardent love of science had led him to attend them in all their adventures, since their first arrival at Quito. They set out, towards the end of January, a little after midsummer in this part of the world, on a more arduous expedition than any they had hitherto attempted: to measure the mountains of Chimborazo and Tunguragua, and to survey all the country affected by the grand catastrophe of 1797. At the distance of six or seven leagues from Riobamba, they crossed the river *Chambo*, by the bridge of *Penipé*, suspended over a ravine, about eight thousand feet above the level of the ocean. This was a kind of bridge, formed of ropes, which is not uncommon in this part of America. The ropes, three or four inches in diameter, are made of the fibres of the Agave Americana, or American aloe, and are covered, transversely, with small cylindrical pieces of bamboo. On each bank they are fastened to a clumsy frame-work. As their weight makes them bend towards the middle, and as it would be imprudent to stretch them with too much force, it is necessary, when the banks of a river are low, to form steps or ladders at both extremities. The bridge of Penipé was one hundred and twenty feet long, and seven or eight broad; but there are bridges which have more considerable dimensions than these.

Nearly all travellers have spoken of the extreme danger of passing these rope bridges, which look like ribands suspended above crevices, or torrents. This danger is not great when a single person passes the bridge as quickly as possible, with his body leaning forward. But the oscillations of the ropes become very strong, when the traveller is conducted by an Indian who walks quicker than himself; or when, frightened by the view of the water, which he sees

below him, through the interstices of the bamboo, he has the imprudence to stop in the midst of the bridge, and lay hold of the ropes that serve as a rail.

A bridge of this description will last in good condition for twenty or five-and-twenty years. It is necessary, however, to renew some of the ropes every eight or ten years. But, in Peru, the police is so negligent that bridges are often seen in which most of the pieces of bamboo are broken. On these it is requisite that travellers should proceed with great circumspection, to avoid holes, through which the whole body might slip. A few years before Baron de Humboldt was at Penipé the bridge over the Chambo broke down. This was occasioned by a dry wind having succeeded long rains: the ropes became brittle, and all gave way at once; and four Indians, who were passing at the time, were drowned.

The ancient Peruvians occasionally constructed bridges of wood, supported by piers of stone; but they generally satisfied themselves with rope bridges. It is by a rope bridge of extraordinary length, and on which travellers are able to pass with loaded mules, that a permanent communication has been established between Quito and Lima. This bridge is near *Santa*, over a torrent which rushes from the Andes. It was not, however, erected till upwards of forty thousand pounds sterling had been uselessly expended in attempting to erect a bridge of stone.

Baron de Humboldt and his party passed along the western declivity of the volcano of *Tunguragua*. This mountain is said to have diminished five hundred and seventy feet in height, since the earthquake of 1797; and the people in the vicinity assert, that they have even seen its summit crumble away before their eyes. Beyond Tunguragua they passed among frightful ruins of *Riobamba*, and other villages destroyed by that earthquake.

About the middle of June they resolved, if possible,

to scale the famous mountain of *Chimborazo*, 21.440 feet in perpendicular height above the ocean, and the loftiest summit of the Andes. This mountain is about ten miles north of Riobamba, and is covered with perpetual snow to the depth of about two thousand four hundred feet from its summit. After almost incredible exertion, they succeeded in reaching the eastern slope of the summit, and planted their instruments, for the purpose of measuring it, on a narrow ledge of porphyritic rock, which projected from a vast field of unfathomed snow. A chasm, five hundred feet wide, prevented their further ascent. They here experienced the same inconveniences to which they had formerly been subject, on the volcano of Antisana. The air was intensely cold and piercing. Respiration became laborious; and the blood oozed from their eyes, their lips, and their gums. They now stood on the highest spot that had ever been trod by man; 19.300 feet, (more than three miles and a half) above the level of the ocean, and yet the top of the mountain was 2140 feet still higher. The whole of this huge mass, like all the high mountains of the Andes, is not granite, as had usually been supposed, but porphyry.

Chimborazo is probably a volcanic mountain, for the track by which the travellers ascended, consisted of a burnt and scarified rock, mixed with pumice-stone, resembling all the streams of lava in this country; and it extended higher up the mountain than they could climb. The summit, therefore, which has a rounded appearance, is in all probability the crater of an extinct volcano. The bulk of this mountain is enormous. That part which the eye embraces at once, near the limit of perpetual snow, is upwards of four miles in breadth. As seen from below, the extreme rarity of the air greatly contributes to the splendour of the snow, and the magical effect of its reflection, at the height of five thousand feet, gives to the azure vault of the sky the tint of indigo.

Carguairazo is a volcanic mountain at a little dis-

tance north of Chimborazo. Like some others of the South American volcanoes, its summit has sunk, after a long series of eruptions, and now exhibits edges bristled with points leaning in all directions. A considerable part of this mountain fell in on the night of the 9th of July, 1698. Torrents of water and mud issued from the opened sides, and laid waste the adjacent country. This dreadful catastrophe was accompanied by an earthquake, which, in the towns of *Hambato* and *Tacunga*, swallowed up thousands of the inhabitants.

On the subject of the volcanoes of South America, Baron de Humboldt remarks, that the grand explosions of those in the kingdom of Quito are periodical, but not very frequent. Cotopaxi and Tunguragua, he says, do not experience one of these eruptions in the course of twenty or thirty years. But, in the intervals, these volcanoes discharge enormous quantities of mud; and, what is more extraordinary, innumerable quantities of *fish*. The latter, he observes, is a phenomenon so common, and so generally known to all the inhabitants of the country, that there cannot exist the least doubt of the fact. Baron de Humboldt obtained exact drawings of these fish, made by a gentleman resident in the country. In the archives of several little towns in the vicinity of Cotopaxi, he found notes relative to fish that had been thrown out by the volcanoes. On the estates of the Marquis de Selva-alegre, Cotopaxi, on one occasion, emitted so great a quantity of fish, that their putrefaction diffused a fœtid odour all around. The now almost extinct volcano of *Imbaburu*, in the year 1691, threw out some millions of fish, on the fields that surround the city of *Ibarra*. And a prevalence of putrid fevers, which commenced at this period, was attributed to the putrid exhalations from these fish, lying in heaps on the surface of the ground, and exposed to the action of the sun. On the 19th of July, 1698, when the volcano of *Carguairazo* subsided, thousands of these animals, enveloped in mud, issued

from the top and were shaken down. Baron de Humbold was assured by several Indians, that the fish which issued from the volcanoes were sometimes alive when they came down the sides of the mountains; but this fact was not sufficiently confirmed. It is, however, certain that, among the thousands of dead fish, which in the course of a few hours, were seen descending from Cotopaxi, with large quantities of water, very few of them were so much disfigured as to induce the belief that they had been exposed to the action of a strong heat. This fact becomes the more extraordinary when we consider the soft flesh of these animals, and the thick smoke which this volcano emits during the time of an eruption. With respect to the kind of fish thus emitted, all the inhabitants agree that they are similar to those which are found in the streams near the foot of the volcanoes, and which are called by the inhabitants *prennadillas:* they belong to the genus *silurus* of Linnæus, and are the only kind of fish which are found in the waters of these elevated regions.

After the travellers had finished their observations relative to these extraordinary mountains, they proceeded on their journey southward, following nearly the great chain of the Andes. They skirted the high savannas of *Tiocaxas*. They then advanced to *Sitzan*, in the midst of a woody desert, and crossed the mountains thence to Cuenza. In their route they saw some ruins of the palaces of the Incas, and other monuments of ancient Peruvian grandeur.

Proceeding from Cuenza, through the village *Cumbé*, they passed a fine cascade, by a road of half a mile in perpendicular descent. And then, traversing the vale of *Saraguru*, which forms one of the richest scenes in the Andes, they entered *Loxa*, a town famous for its commerce in *quinquana* or Jesuit's bark. The trees that produce this bark grow on the neighbouring mountains, at a height from eleven to fifteen thousand feet above the level of the sea.

Continuing their route through a succession of native

villages, amidst groves of annonas and wild citrons, and in sight of the scattered vestiges of Peruvian palaces, they descended to the bed of the river *Cutaco*, in a narrow vale, at the depth of four thousand two hundred feet; and, pressing forward, through plantations of sugar canes, they ascended a forest, near immense ruins of the baths of the Incas. After this they crossed a chain of mountains, not far from a great causeway which those princes had constructed along the ridge of the Andes, from *Cusco* to *Assuay* and *Caxamarca*, and advanced to *San Felipe*. In their progress they had, with infinite difficulty, been able to save their instruments and collections, which were carried on the backs of fifteen or twenty oxen; for, in the space of three days, they had been obliged to ford one river nearly thirty times. After a rapid descent for more than a mile, they came to an Indian hamlet. Then, journeying sometimes through orange groves, and sometimes along mountains and valleys, and, finally, embarking in canoes on the river *Chayma*, the travellers at length arrived at the left bank of the river *Amazon*. They proceeded up this noble stream, as far as the cataracts of *Tomeperda*. Thence, directing their course toward the north-east, over the Andes, by the famous silver mines of Chota, they reached the town of *Caxamarca;* and, after a considerable descent on the western slope of the mountains, they descried, with delight, the great Pacific Ocean. They descended to its naked and sterile shores. These they skirted for a considerable distance, and, in October, arrived at *Lima*, where they continued some months to rest and refresh themselves.

From *Callao*, the port of Lima, they went by sea to *Guayaquil*, and thence in a frigate to *Acapulco* in New Spain.

Eighteenth Day's Instruction.

CHILI.

CHILI is a country distinguished not so much by its extent, or its present political importance, as by the mildness and amenity of its climate, the fertility of its soil in the valleys and lower parts, and its numerous and valuable natural productions. It *extends* from Peru on the north, as far as about the forty-fifth degree of south latitude, and is bounded towards the east by the provinces of Tucuman and Buenos-Ayres, on the west by the Pacific Ocean, and on the south-east and south by Patagonia, or the land of Magellan.

At the time when the Spaniards first effected a landing in South America, the Incas of Peru had subdued the northern parts of Chili, and meditated the reduction of the whole country. The Spaniards took possession of Peru; and, in 1535, Diego Almagro, one of the Spanish chiefs, marched from Cusco to Chili, at the head of five hundred and seventy Europeans and fifteen thousand Peruvians. His troops experienced all the calamities arising from fatigue, from famine, and from the rigour of the climate, in regions so elevated that a degree of cold prevails almost equal to that within the polar circle. Two-thirds of his army perished in this expedition; and the survivors, when they arrived at the plains of Chili, had new difficulties to encounter. Such of the Chilese, as had been already subdued by the Incas, made no resistance; but several of the tribes, bold, intrepid, and inured to fatigue, long maintained their independence. Even to this day the mountainous territory is possessed by some tribes of the original inhabitants, who have carried on almost perpetual war against their invaders, during the course of two centuries.

That portion of the country which became subject to the Spanish government, was divided into thirteen *districts*. These are irregular in size and imperfectly designated. Some of them extend from the Andes to the sea; and others occupy but half that space, and are situated near the mountains, or upon the coast. In the late political contests betwixt Spain and her American colonies, the inhabitants of this country have declared themselves independent. The Indian possessions lie chiefly between the river Bibio and the island of Chiloe.

Of all the provinces of South America, Chili stands unrivalled for its picturesque beauty, and for the grandeur of its landscapes. The serenity of its sky, the constant mildness of its atmosphere, and its abundant fertility, render it a country extremely agreeable for residence. Though bordering on the torrid zone it never experiences extreme heat, for it is constantly refreshed by cooling breezes from the Andes and the sea. The *seasons* regularly succeed each other. Spring begins in September, summer in December, autumn in March, and winter in June.

European productions of nearly all kinds are well adapted for growth in Chili; particularly grain, olives, vines, fruit, flax, hemp, and garden herbs. In the northern districts are found an abundance of sugar-canes, coffee, cotton, cocoa-nut-trees, and other tropical productions. Maize, barley, peas, and potatoes, are well known to the Chilese. Of the last they have upwards of twenty distinct kinds; and it is conjectured that this valuable root was first brought into Europe from Chili. Many of the *plants* of this country are valuable as dyes, and others in medicine; and ornamental shrubs and flowers are innumerable. More than three-fourths of the trees of Chili are evergreen, and do not shed their leaves in winter. The wild *animals* are very numerous. Among the most remarkable of the *quadrupeds*, are the cloven-footed horse; and four small kinds of camels, called llamas, vicunas, huanacos, and Peru camels.

Of these the two former are occasionally employed for carrying small burthens, and their hair or wool is woven by the inhabitants into useful articles of various kinds. Among the *birds* are the condor, a species of vulture, of size so immense that it sometimes measures sixteen feet from tip to tip of its extended wings; the mocking bird, a small species of ostrich; parrots and humming-birds of numerous kinds; the *reptiles* and *serpents* are not numerous; but the *fish* and *insects* are of various and extremely interesting species. Oysters are here excellent and in great abundance; and there are many kinds of lobsters and crabs. But nature has not exhausted her bounty on the surface of the earth; the *minerals* and *metals* are extremely abundant. Veins of gold, silver, copper, lead, and tin, are found in several parts of the mountains. A little hill, north-east of Talca, is said to be almost wholly composed of amethysts. Turquoises, emeralds, and topazes, are also found in some parts of the country. Spar, crystal, agate, and jasper, are of various and beautiful kinds. Some of the mountains contain asbestos, mica, or Muscovy glass, and rock salt; the last is abundant, and often crystallized in cubes of various colours. Sulphur and bitumen are found in various parts. Of all the metals none occurs so frequently as gold. There is scarcely a mountain in the whole country, which does not, more or less, produce it: accordingly it is found in the soil of the plains and in the sand of nearly all the rivers; and several gold mines are wrought in different parts of the country.

The Chilese, like the Peruvians, are subject, though not to an equal extent, to the alarm of *earthquakes*. They usually calculate upon three or four shocks every year, but these are slight, and little attention is paid to them. Great earthquakes seldom happen. During a period of two hundred and forty-four years only five occurred. The first, in 1520, destroyed some villages in the southern provinces: the second, in 1647, ruined many of the houses of *St. Jago:* the third, in 1657,

destroyed a great part of the capital: during the fourth, which took place in June, 1730, the sea was driven against the city of *Conception*, and overthrew the walls; and the fifth, on the 26th of May, 1751, completely destroyed that city, which was again inundated. This last earthquake levelled with the ground all the fortresses and villages situated between the thirty-fourth and fortieth degrees of latitude. Its course was from north to south. About a quarter of an hour before its commencement there was a slight shock, accompanied by a ball of fire that precipitated itself from the Andes into the sea. The great shocks began about midnight, and continued four or five minutes each; but the earth was in a state of almost constant tremor till day-break. Just before the earthquake the sky was perfectly clear in every quarter; but, immediately after its commencement, the atmosphere became loaded with black clouds, which poured down an incessant rain for the space of eight days. At the end of this time there was a recurrence of slight trembling, which continued during a month, with short intervals of fifteen or twenty minutes between each. It is not, however, supposed that, on this occasion, any persons perished in the whole province, except seven invalids who were drowned in the city of Conception.

It will immediately be supposed that a country thus subject to earthquakes, must also have numerous *volcanoes*, and be subject to volcanic eruptions. This is the case. There are no fewer than fourteen mountains in a constant state of eruption, and a still greater number that discharge smoke only at intervals. These are all situated among the Andes. The greatest eruption ever known in Chili, was that of *Peteroa*, situated among the mountains north-west of the city of *Conception*. It took place on the 3d of December, 1760; and in the course of it the volcano formed a new crater, and a neighbouring mountain was rent asunder. The eruption was accompanied by an explosion so loud that it was heard throughout the whole country. The quan-

tity of lava and ashes that were ejected was so great, as to fill the neighbouring valleys, and occasion a rise of the waters of an adjacent river, which continued for many days: at the same time the course of another river was impeded for ten days, by part of a mountain falling and filling up its bed. The water at length forced itself a passage, overflowed all the neighbouring plains, and formed a lake which still exists.

The *general appearance* of Chili is that of a plain, which inclines from the mountains towards the sea; and it may be considered as a prolongation of the western base of the Andes. From its situation it receives the waters produced by the melting of the snow of the mountains. Consequently *rivers*, streams, and springs, are innumerable: they are to be found in every part; and springs are discoverable even on the tops of the lower mountains. The principal rivers are one hundred and twenty-three in number; and fifty-two of these communicate directly with the sea, and convey thither the waters of all the others. Although, from the inconsiderable width of the country, the course of these rivers is short, several of them are navigable, through at least half their distance, for ships of burthen. The principal rivers are the *Maule*, the *Bibio*, which is two miles in width, the *Canten*, and the *Valdivia*. Their streams, for a considerable distance from the mountains, are peculiarly rapid. They afterwards flow more slowly; their beds are very broad, the bottoms generally stony, and the banks low. The last circumstance is of great advantage to husbandmen who occupy the adjacent lands, and who avail themselves of it, to let the water into canals, from which, in times of drought, they irrigate their fields.

In this country the fine arts have not hitherto made much progress; and the mechanical arts are yet far from having arrived at perfection. The articles of traffic in this country consist chiefly of gold, silver, copper, hides, and tanned leather, wheat, hemp, oil, and fruit.

In our survey of the principal parts of Chili we will begin with *Copiapo*, its most northerly district. This has its name from a small town situated in the twenty-seventh degree of south latitude. The soil adjacent to the town is impregnated with mineral salt and nitre; and eastward, among the mountains, there are mines of gold, silver, lead, iron, and sulphur. The soil of this province is fertile; and yields grain of excellent quality, and fruits of various kinds.

Proceeding southward we enter the district of *Coquimbo*. It consists of tolerably fertile and populous plains and valleys, which produce an abundance of grain, wine, and oil; and its capital, of the same name, is situated at some distance from the sea, partly in a verdant and well watered valley, and partly on an eminence resembling a terrace. This eminence extends about half a mile in length, and commands a fine prospect of the bay and neighbouring country. The bay is semicircular, and has good anchorage, but is exposed to the winds. Eastward, among the mountains, there is a volcano. The mountains abound in metals, and particularly in copper.

South of Coquimbo is *Valparaiso*, a district which extends as far as the river *Maule*, and consists of thinly inhabited plains and fertile valleys, partly covered with forests, and partly with fruit-trees, flowers, and pastures. The town of *Valparaiso* is situated at the foot of a hill, on the shore of a bay three leagues in extent. This town is small, and defended by a strong fort. Being the nearest port to St. Jago, the capital of Chili, it has of late acquired much commercial importance. The bay affords good anchorage and shelter for vessels, except during the tempestuous weather in April and May. The environs of Valparaiso are watered by numerous rivulets, and are so fertile as to produce corn sufficient not only for the consumption of the inhabitants, but also for exportation.

St. Jago is an inland district at the foot of the Andes, and about the thirty-fourth degree of south lati-

tude. It is eleven leagues in length and twenty-three in breadth, and, in many parts, is extremely fertile. The only place of importance that it contains is *St. Jago.* This, the capital of Chili, is a large and well built city, about sixty miles from the coast of the Pacific Ocean, and twelve or fourteen from the mountains. It contains a cathedral, several churches and convents, and numerous public edifices. The streets are straight, broad, and cross each other at right angles. On account of the frequent occurrence of earthquakes, very few of the houses are more than one story high. They are, however, commodious, whitewashed on the exterior, and generally painted within. Each house has usually a pleasant garden watered by an aqueduct, which also furnishes water for the use of the family. The houses belonging to the wealthier classes, particularly to the nobility, are furnished with much splendour. The churches are generally more remarkable for their wealth than their style of architecture. The cathedral, however, is an exception. It is constructed of stone, is of considerable height, and nearly three hundred and ninety feet in length. The plan of it was drawn by two English architects, who superintended the execution of the work. But, when it was about half finished, they refused to go on, unless their wages were increased. In consequence of this the building was suspended. Two of the Indians, however, who had worked under the Englishmen, and who had secretly found means to instruct themselves in every branch of the art, completed it. The plain in which the city of St. Jago has been built is extremely fertile, and abounds in plantations of olives and fruit trees, and produces also a great abundance of corn.

Conception is a district lying between the rivers Maule and Bibio, and in the thirty-sixth degree of south latitude. Its climate is temperate and its soil fertile, but it is thinly peopled and indifferently cultivated. The only place of note that it contains is the city of *Conception,* or *Penco,* as it is called by the In-

dians. This city was originally built in the year 1550, and near the sea shore; but having been destroyed by the earthquake in 1751, a new one was constructed twelve years afterwards, about three leagues inland, and on the banks of the river Bibio. It contains a cathedral, and several convents and churches. The houses, like those of St. Jago, are only one story high. Corn and vines are here extremely abundant. The fields are covered with innumerable flocks, which, without requiring any care, multiply beyond all calculation. Oxen, horses, and mules, are also extremely numerous. A large ox is worth about thirty-six shillings sterling, and a sheep about three shillings and sixpence.

Much indolence prevails among the inhabitants, and fertile as the land in the vicinity of Conception is, the district is by no means in a flourishing state. The houses of the most opulent inhabitants are almost destitute of furniture.

The dress of the women consists chiefly of a plaited petticoat, which discovers half the leg. This petticoat is formed of gold and silver stuffs, and, being always reserved for extraordinary occasions, is transferred, like jewels, from one generation to another. Some of the women of Conception also wear striped stockings, of red, blue, and white, and very short shoes. The common people are much addicted to theft; but Spaniards of the higher classes are extremely polite and hospitable. Most of the inhabitants, not excepting the women, excel in horsemanship. The whole number of inhabitants is supposed to be about ten thousand.

Conception is a place of considerable trade. The bay of the same name extends about three leagues in width, and as many in depth. The country around the bay, to the distance of twelve or thirteen miles from the shore, has, at the depth of two feet below the surface, a stratum of shells of different kinds, twelve or fourteen feet in thickness, without any mixture of earth. Similar deposits of shells are sometimes found even on the tops of the lowest hills.

Valdivia is a district situated in the fortieth degree of south latitude. The town of the same name is about one hundred and fifty miles south of Conception, and stands on a peninsula between two rivers. It is inclosed by a wall of earth, and contains about three thousand inhabitants. Criminals from Peru, and various parts of Chili, are transported to this place for a limited time, or for life, according to their crimes. The Spaniards formerly considered Valdivia to be a place of great importance, and accordingly protected it by strong fortifications. But it is not now much frequented, as the gold mines in its neighbourhood are no longer productive.

Chiloe, an island lying about the forty-first degree of south latitude, and near the coast of South America, is another of the districts of Chili. It is about one hundred and forty miles in length, and thirty in breadth; but is almost divided in the middle by bays or creeks. This island is well peopled with Spaniards, Mulattoes, and Indians. It has forests of excellent timber, particularly cedar; and abounds in vines. Cattle, sheep, and swine, are here very numerous, and afford excellent meat. The principal trade of Chiloe is in timber, and wood of various kinds. The governor of this island resides at a little town on the north-east coast, called *Chacao.* In the sea, immediately around Chiloe, are several small islands, some of which are inhabited, and all of which are included within the same government.

The Indians of Chili.

Nothing is known respecting the primitive inhabitants of Chili. The Indians now existing in this country have no records nor monuments of antiquity, that can elucidate their history. On the arrival of the Spaniards, three centuries ago, the inhabitants of this country, being unacquainted with the art of writing, their tradition-

ary accounts were extremely vague and unsatisfactory. They cultivated their land with maize, potatoes, and other native plants; and encouraged the breed of vicunas and sheep, which supplied them with flesh for food, and with wool for clothing. Their villages consisted of scattered huts, and their furniture was extremely rude and inconvenient. From the mountains they extracted gold, silver, copper, tin, and lead; and of a substance, like bell-metal, they formed axes and other instruments.

The present Indians of Chili, who are chiefly descendants of the race called *Araucans*, still possess a considerable portion of the country. They derive their name from the province of *Arauca*, which extends from the river Bibio southward. Though they do not in general exceed the middle size, they are, for the most part, robust, well formed, and have a warlike aspect. Their face is nearly round; their eyes are small, but lively and expressive; their nose is somewhat flat; their mouth is well made, and their teeth are white and uniform. Like other Americans, they have naturally little beard, and such as grows they carefully eradicate. The hair of their heads is black and abundant, and they carefully bind it up in a knot. In all their actions the Araucans are extremely vigorous; and their mental qualities are said to correspond with their bodily vigour. They are characterized as intrepid, patient of fatigue in war, prodigal of their lives in defence of their country, courteous, hospitable, faithful to their engagements, generous, and humane towards their vanquished enemies. These qualities, however, are tarnished by the vices of indolence and drunkenness.

The *dress* of the Araucans is short, made wholly of wool, and generally of a blue colour. The clothing of the women is modest and simple; but sometimes set off with artificial ornaments. Their hair is parted into flowing tresses, and their heads are adorned with false emeralds, or a kind of green stone, which they very

much value. They also use necklaces and bracelets of glass beads, square earrings of silver, and numerous rings of silver on their fingers.

The whole territory of Araucana is divided into four provinces, and each province into a certain number of districts. The *government* is an aristocracy, and vested in three orders of chiefs, who hold, in a spacious meadow, their general congress for the transaction of important business. The *laws* of this people are wholly traditionary. They are allowed to have a plurality of *wives;* and each house is so constructed as to admit the number of wives which the owner is able to support. The *habitations* of the Araucans are dispersed over the country, but they are usually situated near rivers: crowded towns they regard as prisons.

As to their *religious notions*, these people acknowledge the existence of a Supreme Being. They believe that his residence is in heaven, that he is the soul of the creation, dreadful in his thunder, the architect of the universe, omnipotent, eternal, and infinite. They also believe that the affairs of the world are administered by inferior spirits, of various rank and power. Besides these, they admit of an evil principle, and imagine that there is a deity, the author of calamity and death. Although the Spaniards have employed missionaries for the conversion of the Araucans, their labours to establish Christianity among them, have not hitherto been attended with much success. The Araucans have some notion respecting the immortality of the soul. They suppose that, after death, the soul passes towards the west, to a place or country, called "Galceman," where, according to some of their teachers, the good are recompensed with sensual delights, and the bad are punished by a deprivation of these; but, according to others, all souls will at last enjoy pleasure; for they assert that punishments, like crimes, will be short and transitory.

Their *funeral* ceremonies are somewhat singular.

After an Araucan is dead, his friends watch his body all night, and, on the third day they carry it to the burial place of the family, which is generally in a wood or upon a hill. The bier is surrounded by women, who affect to weep. Another party of women spread ashes behind, in order to prevent the soul from returning to the house whence it was taken. When the body is set down, warlike weapons are placed around it; and, if it be a female, ornaments are arranged in a similar manner; together with plenty of food, and vases of liquor, often cyder or wine, that the soul may not be in want of sustenance on its journey to the other world. After having taken leave of the dead, with many lamentations, they heap upon it earth or stones, into a pyramidal form; and over this heap pour copious streams of cyder. The Araucans imagine that an old woman soon afterwards arrives, in the form of a whale, to carry the soul across the ocean, and deliver it to another old woman, who guards the seats of bliss. The occupation and pleasures of the future *life* are supposed to continue the same as in the present. They believe that a husband, if he choose it, may have his wife again; but that he cannot have children, as this is the abode of the dead; that there are wars and battles; and that armies meeting to combat in the air, are the cause of thunder and lightning. The Araucans have some notion of a general deluge; during which, they assert, that many persons of their nation were saved, by having taken refuge on a floating mountain.

These people *calculate their time* by the solar year, and commence their year on the 22d of December. They divide the day into twelve parts, six of *light*, and six of darkness. They distinguish the planets from the fixed stars, and believe that they are inhabited. The Araucans, though they have little notion of *general science*, cultivate rhetoric, poetry, and medicine. With regard to *medicine:* their physicians are divided into three classes; the principal of these have some know-

ledge of the pulse and of the use of herbs; the next believe that all diseases proceed from insects; and the third, ascribe them to witchcraft.

The use of *money* is not known among the Araucans, and all their commercial transactions are performed by exchange. The education of children is restricted to horsemanship, the use of weapons, and the practice of speaking their language with elegance. The *food* of the Araucans consists chiefly of grain and pot-herbs variously dressed; but maize and potatoes are the most esteemed. In place of bread they have a kind of small cakes, or they use roasted potatoes. Their drink consists of various kinds of beer and cyder. They are also fond of wine, which they procure from the Spaniards.

Music, dancing, and gaming consitute the principal amusements of the Araucans. Their music is bad, and their songs are harsh and hideous; but their dances are cheerful and pleasant. In these the women dance apart from the men. They play at a game somewhat like chess; and are fond of wrestling, racing, and tennis. Besides these, they have games peculiar to themselves.

Nineteenth Day's Instruction.

PATAGONIA AND TERRA DEL FUEGO.

West Coast of Patagonia.

An imaginary line, drawn across the continent of South America, in the forty-fifth degree of south latitude, is usually considered the northern boundary of *Patagonia* or *Terra Magellanica*, as it is sometimes called. On the south this country extends to the Strait of Magellan, and on the east and west it is bounded by the ocean.

It was first discovered by the Portuguese navigator,

Magalhaens, in the year 1519; but his account of it is defective and erroneous*. It is so far distant from every civilized nation, and, in some parts, has so inhospitable a *climate*, that it is even yet very imperfectly known. From north to south it is divided by a continuation of the mountains of the Andes. Some of its *plains* abound in rich pasturage, but it is nearly destitute of wood, except in the parts adjacent to the Strait of Magellan. There are no European settlements on its coast.

I will first describe to you the most important bays, islands, and capes around the coast; and afterwards give you some account of the habits and customs of the inhabitants.

Of the western shore little is known. About the forty-sixth degree of south latitude, there is a fine harbour, south-east of the island of *Inchin*; and somewhat more than sixty miles south-west of it is *Wager Island*, on the bleak and inhospitable shore of which the Wager, one of the vessels of the squadron commanded by Commodore Anson, was wrecked on the 15th of May, 1741. Of this melancholy occurence a very interesting narrative was published by Lieutenant (afterwards Commodore) Byron†.

An island, called *Madre de Dios*, in latitude fifty-one degrees south, is about ninety miles in length, and eighteen or twenty in width. This island, which is also sometimes called *Trinidad*, on account of three of its mountains or head lands, which are visible at a distance, is partly stony and barren, and partly covered with wood; but the trees are of dismal aspect, being blasted by stormy winds, and being scarcely ever covered with verdure. The inhabitants are few in number, and appear to lead miserable lives.

---

* See "Biographical Conversations on Eminent Voyagers," p. 49.

† For an abstract of this narrative, see "Conversations on Eminent Voyagers," p. 182.

Proceeding southward from Madre de Dios, we come to the *Strait of Magellan*, a famous arm of the sea, which separates the continent of South America, from the island at its southern extremity, called Terra del Fuego, which I shall next describe.

Terra del Fuego.

This large island, which measures three hundred miles from east to west, and, in its greatest width, nearly two hundred miles from north to south, was originally discovered by Magalhaens. It was named by him *Terra del Fuego*, or "Fiery Land," in consequence of his having seen some volcanos among its mountains. Narrow channels from the sea divide it into eleven or twelve different islands.

From many parts of the sea, adjacent to the shore, this island presents the dismal aspect of black and stupendous rocks, the barren summits of which are generally covered with snow. The interior has not hitherto been explored. Those parts of the shore which are most fertile, consist of deep vallies and plains, which, in summer, are watered by brooks and clothed with verdure. On the declivities of some of the hills, there are a few scattered trees, and many species of plants that are hitherto unknown in Europe. The cold of winter is intense; and storms are frequent at most seasons of the year.

The *inhabitants* are as rude, and, in appearance, as miserable as the country which they possess. They are described, by navigators, to be among the most sluggish and stupid of the human race. Their whole character is a strange compound of stupidity, indifference, and sloth. They are covered with filth and vermin; and reside in huts, constructed in the form of sugar loaves. In height they seldom exceed five feet and a half. Their heads are large, their faces broad, their eyes small, their cheek-bones prominent, and their noses flat. Their hair, which is black and lank,

hangs about their heads in disorder, and is besmeared with train oil. On their chin they have a few straggling hairs instead of a beard; and, cold as the climate is, their only clothing consists of a piece of seal skin, which hangs from their shoulders to the middle of the back, being fastened round their neck by a string. They are as ugly and disgusting as can well be imagined; and the women are more disagreeable than the men. Their principal food consists of seal's flesh; and their weapons are bows and arrows, and a kind of spears, with which they kill seals and fish. These people have boats that are formed of the bark of trees, fastened together by a kind of grass, and that have their seams stopped with moss. On a heap of sand, placed in the middle of these crazy vessels, they constantly keep a fire. They believe in the existence of evil spirits; and have priests and physicians whom they suppose capable of deprecating the vengeance of these invisible enemies. It has been observed, respecting the inhabitants of Terra del Fuego, that, with the fewest conveniences in nature, they seem to be content; and that, although they live in nearly the most unpropitious climate that has hitherto been discovered, they do not repine at their lot.

From the north-western promontory of Terra del Fuego, called *Cape Desire*, the coast runs south-east. It is irregular and broken, and has every where a barren and dreary aspect; appearing as though it were separated into a great number of small, black, and barren islands. Beyond this are lofty mountains covered with snow. In some places the rocks are lofty and steep, and in others are valleys interspersed with a few trees. On one point there is a rocky promontory, which, from a fancied resemblance to that edifice, has been called the *Cathedral of York*. Many of the rocks along the coast have been hollowed by the sea into deep caverns, that are inhabited by seals and other marine animals.

The extreme southern point of this part of the coast has the name of *False Cape Horn*. True *Cape*

Horn is the southern extremity of what is called the *Hermite Islands*. This cape, which was originally discovered by Admiral Drake, is known at a distance by a high round hill, in south latitude fifty-five degrees fifty-eight minutes. On its north-west side are two peaked rocks, like sugar loaves. The Hermite islands are environed by rocks, which separate the Pacific from the Atlantic Ocean. Round Cape Horn there are strong currents, which are occasionally dangerous to vessels that approach too near the shore. The influence of these currents extends to the distance of more than thirty miles from the land.

Ships which sail from Europe into the Pacific Ocean, either pass round Cape Horn, or, if the weather will not admit of this, they proceed through the Strait of Magellan. The latter course, however, is usually considered to occupy more time, and to be attended with more fatigue to the men, and danger to the ship than the former.

The coast from Cape Horn, eastward to *Cape Good Success*, is little known. There are, however, some large and deep bays, the entrances of which are confined by rocks. Beyond this cape there is a bay of the same name, in which Captain Cook anchored in the year 1769. A little northward of it is the *Strait of Le Maire*, so called from a Dutch navigator of that name, who, in 1615, was the first European that passed through it. This strait is formed betwixt Terra del Fuego and *Staten Island*, and is passed by nearly all navigators who sail round Cape Horn.

Staten Island lies in fifty-four degrees fifty minutes of south latitude. Its north coast presents a varied scenery of wild and horrid rocks, indented with several bays or harbours. On this side the island seems inaccessible; for the rocks appear piled in pyramidal heaps, that rise through the clouds in abrupt and rugged pinnacles. In the interior, however, there are some verdant and fertile spots; and a considerable portion of its surface is found to be covered with trees, shrubs,

plants, and herbage. The western shore is accessible without much danger; and near the eastern extremity there is a good harbour, about two miles long and one mile broad. Every part of the coast abounds in seals and other marine animals, and also in a great variety of oceanic birds.

Respecting the coast of Terra del Fuego, from the *Bay of Good Success* to its north-eastern extremity, little is known.

Strait of Magellan.

We are now arrived at the eastern extremity of the *Strait of Magellan.* This is a winding channel, about five hundred miles in length, and, in different parts, from three or four to thirty or forty miles in width. It is interspersed with numerous islands and rocks, and is bordered by high mountains, that are frequently covered with snow. This strait has many capes and bays, that afford places of anchorage and security to ships. It has been sailed through and examined by several eminent navigators. The temperature of the climate is represented by some as excessively cold and severe; but others state, that the summers at least are very agreeable. The navigation of it is generally tedious and difficult.

The width of its entrance is five or six and twenty miles. Here the country on each hand yields neither wood nor water. The north-eastern point of the Strait is called *Cape Virgin.* On the coast of Patagonia the Spaniards, about two hundred and forty years ago, founded two towns; one near the mouth of the Strait, and the other at some distance within it; but both were shortly afterwards abandoned.

Within the Strait, on the right hand, is *Possession Bay,* a large harbour of semicircular form, behind which are two mountains, called, from their appearance, *Ass's Ears.* Beyond this bay, the channel about a league in width, extends upwards of forty miles to-

wards the south-west. The navigator next comes to an opening nearly circular, which is about twenty-four miles in length, and twenty miles broad. The coast is here flat and barren. At the commencement of a second narrow passage, there is, on the north shore, a white cliff, called *Cape St. Gregory*, and a bay where ships may anchor in eight fathoms water, and over a clean sandy bottom. The passage is about twelve miles long. Four leagues beyond its termination are three islands called *Elizabeth*, *Barthelemi*, and *St. George Islands*, which, at first view, appear to be steep cliffs. The first of these is inhabited by savages, who reside in circular huts, rudely constructed with branches of trees. From this part of the Strait the tops of the inland mountains appear to be covered with snow. The country westward of these islands affords an abundance of wood and water. *Sandy Bay*, about fourteen miles south of Elizabeth Island, is bordered with trees and verdure. About eighteen miles further south is *Freshwater Bay*, which lies in a corner, environed by low lands, shaded with trees and wild currant bushes. At this part of the strait, the inland valleys and meadows of Patagonia appear to be very fertile. The next harbour on the same coast, is called *Port Famine*. It is near the midway of the strait, is protected on the north by a steep and wooded promontory, and affords good anchorage for vessels of almost any burthen. A considerable river here falls into the strait. Its banks and the adjacent valleys are shaded with lofty trees and are inhabited. This bay received its name from the following melancholy occurrence. The Spaniards, in 1581, commenced here the foundations of a town, which they proposed to call Phillipville; and they left in it a colony of four hundred persons. Their object in forming this town was to secure the command of the strait. Six years afterwards, when the British circumnavigator, Cavendish, arrived here, he found the place in ruins, and only one man left. All the others had been starved to death, except twenty-three, who had

set out for the river Plata, and who were never afterwards heard of. Hence it was that Cavendish named the bay, Port Famine.

Between Port Famine and *Cape Forward*, the most southern point of Patagonia, there is a curvature of the coast, which contains three considerable bays; one of these receives a river, that is navigable by small vessels. Cape Forward consists of three hills; and at the foot of it the water is of great depth. Here the country, to the distance of ninety miles, is well wooded; and the trees are of large size. The soil in the valleys is fertile, and the inland hills are of immense height.

Westward from Cape Forward is *Port Gallant*, a deep harbour, with a narrow entrance, Bougainville, the French navigator, anchored in this harbour in December, 1767. The adjacent territory is covered with trees and herbage; and, about three miles inland, between two mountains, there is a remarkable cataract about twelve hundred feet in depth. The channel of the strait is here not more than three miles wide, and is embarrassed with small islands. Beyond this bay, the strait becomes more extended; is several leagues in breadth, and on both shores is woody. *St. Jerome's Channel*, eight or nine leagues north-west of Port Gallant, extends northward, and its termination has not yet been discovered. It is bounded on the west by a cape of the same name; beyond which is *Cape Quod*, consisting of craggy rocks, the highest of which resembles the ruins of ancient structures. The breadth of the strait does not here exceed four miles; and the land, on both sides, is steep, rocky, and of horrific appearance. From Cape Quod the coast extends north-west for many leagues, and has, in different parts, several bays and inlets; and the strait terminates at a point of the Patagonian coast, called *Cape Victory*, which lies in fifty-two degrees fifteen minutes south latitude, and seventy-five degrees forty-five minutes west longitude from Greenwich. The south-west end of the

strait is formed by a square peninsula with two capes, one called *Cape Pillar* and the other *Cape Desire*.

The strait of Magellan is navigable from September to April; but, during the remainder of the year, it is extremely difficult and dangerous, on account of the violence of the winds, and the rapidity of the currents. Commodore Byron says, that this strait may, without much difficulty, be passed about the month of December; and, at this period, he considers it not only a safer but a better course than that round Cape Horn. Among other advantages attending it, are the facility of catching fish in almost every part, and the abundance of wild celery, scurvy grass, and other vegetables, which are to be procured from the shores. Wood and water are also to be procured at most of the anchoring places. Captain Wallis, who entered this strait in December, 1766, and quitted it in April following, states that here, "even in the midst of summer, the weather was cold and tempestuous: the prospects had more the appearance of a chaos than of nature; and, for the most part, the valleys were without herbage, and the hills without wood."

We must now return to the entrance of the strait, for the purpose of describing the few parts which are hitherto known of the

Eastern Coast of Patagonia.

The first point of land, north of the strait, is called *Cape Virgin*. Betwixt this and the *Bay of St. Julian*, in the forty-ninth degree of south latitude, the shore is described by navigators, to be in general rocky, barren, and inhospitable.

The first European vessels that entered the Bay of St. Julian, were the Spanish squadron under the command of Magalhaens. He arrived there in the month of April, 1520; and, as the winter of the southern climates was then approaching, he continued there five

months, till the ensuing spring. The adjacent country was diversified with hills and valleys; and, at a considerable distance inland, were lofty mountains, the summits of which were covered with snow. For some time it was thought that the country was uninhabited; but, after the squadron had been at anchor a few weeks, a single Indian ventured first to approach the shore; and afterwards several others made their appearance. Magalhaens describes them to have been much larger and taller than Europeans, to have had their bodies painted with various figures, to have carried bows and arrows, and to have been clad in a kind of garments made of the skins of beasts. They also wore a kind of shoes made of skins. These caused their feet to appear like those of an animal, whence Magalhaens named them *Pata-gones*, from the Spanish word *Pata*, which signifies a hoof; and this is said to have been the origin of the appellation of *Patagonia*, subsequently given to the whole adjacent country. Port St. Julian was afterwards visited by the English circumnavigators Drake, Anson, and others, whose destination was the Pacific Ocean; and it has been found a convenient place for the refitting and repairing of vessels.

Some distance north of this harbour is *Port Desire* or *Deseado*, called by Admiral Drake, *Seal Bay*, on account of the great number of seals which the crews of his ships killed upon the shore. No provisions nor refreshments are to be obtained here; for the whole country, to the distance of several miles inland, is barren and desolate. The mouth of the harbour is narrow, and has many rocks and shoals around it; and the tide runs with great rapidity. The islands adjacent to Port Desire abound in prodigious numbers of seals, penguins, and sea-birds.

Beyond *Cape Blanco* there are some large and extensive bays; but of the whole coast, betwixt this Cape and the river La Plata, very little is known.

The Indians of Patagonia.

With regard to the inhabitants of the southern extremity of America, they are usually divided into two distinct nations, one of which, called *Moluches*, live on the western, and the other, called *Puelches*, live chiefly on the eastern side of the mountains. Of these the former are subdivided into several tribes, some of which are now mixed with the Araucanos of Chili, and accord, in most of their habits and customs, with that people.

The *Puelches*, or eastern inhabitants of Patagonia, occupy nearly all the remaining parts of the country. They are subdivided into four tribes, the individuals of which have, in general, no fixed habitations nor places of residence. One of these tribes called *Tehuelhets*, are the same that have been denominated *Patagonians*. They are more numerous than all the other Indians of this part of America. They are of gigantic stature, many of them being from six to seven feet in height. This is a fact, which was first established by Magalhaens, and which has subsequently been confirmed by the navigators, Byron, Wallis, Carteret, Bougainville, and numerous others.

Captain Wallis describes the Patagonians to be of a deep copper colour, and to have their hair straight, and as harsh as hog's bristles. This, he says, they wear tied in a bag, with a cotton string. They are well formed, robust, and bony, and are *clothed* with the skins of the guanaco, an animal of the camel tribe. These skins they sew together, in pieces about six feet long, and five feet wide; and wrap round their body, fastening them with a girdle. Some of the Patagonians wear a square piece of cloth, made of the downy hair of the same animal; this they hang round their neck, a hole being made for the head, and it falls down round their body as far as the knees. Their stockings or boots, are of the rudest kind; consisting

merely of the skin of a horse's thigh and leg, flayed off whole, dried, and softened with grease. They paint their face red or black. Round one eye they have often painted a large white circle, and round the other a black one. Similar circles are sometimes painted on other parts of their face, and round their arms. The eyelids of all the young women are painted black. Their teeth are, in general, white and even.

Most of them are furnished with a kind of sling, which they use as an offensive *weapon*, and carry with them, tucked in their girdle. This consists of a double string, about eight feet long, having a piece of leather at the extremity, capable of holding two stones, weighing about a pound each. The Patagonians use this sling, by whirling it round their head till it has acquired a sufficient force, when they discharge the stones from it against the object they are desirous to strike. In the management of this kind of double shot, they are so expert that they are able, with both stones, to hit a mark at the distance of fifty feet. In their chase of the guanaco and the American ostrich, they use this sling in a different way, they approach these animals by galloping after them on horseback; and, when near, they swing the balls round their legs so as to throw them down, and prevent their further flight.

All the Patagonians, both men and women, have horses, which appear to be of a Spanish breed, and which were, no doubt, originally obtained from the Spanish colonies; and they ride with great ease and security. Bougainville asserts that they lead nearly the same kind of life as the Tartars: that they wander, on horse-back, through the immense plains of South America, pursuing the game or wild beasts with which these plains abound. They eat their food raw, and even devour the paunch of the ostrich, without any other preparation than turning it inside out and shaking it.

Each family of Patagonians is of a cast or tribe distinguished by the name of some animal; and they

believe that each tribe had its particular creator, who resides in some huge cavern beneath the surface of the ground. Here, they say, that all of that tribe will go, after death, to enjoy the happiness of being eternally drunk. According to their notions, these spirits first made the world, and then, in their respective caves, created men. To the Indians they gave as weapons the spear, the bow and arrow, and the ball and sling: to the Spaniards, fire-arms and swords, and then sent them above ground. Animals they believe to have been, in like manner, created in these subterraneous caves. Those that were nimblest came out first; but when the bulls and cows were coming out last of all, the Indians were frightened at the sight of their horns, and stopped up the mouths of the caves; the Spaniards, however, they say, were wiser, and suffered theirs to come out: they thus explain why there were no cattle nor sheep in Patagonia till the Spaniards introduced them. It is the opinion of this people, that the whole of the animals which have been created below, are not yet come out.

The Patagonians attribute all the evil that happens in the world to certain malignant spirits, who, according to their notions, are continually wandering about for the purpose of inflicting it: they attribute even fatigue to this agency. They have *priests* or jugglers, each of whom is supposed to have, as his familiars, two of these spirits; and the souls of the priests are supposed, after death, to be associated with the spirits, and to perform similar works of mischief. These jugglers are of both sexes, and are trained to their office from childhood. No ceremonies are performed towards the imaginary good spirits; and, though some are performed towards the evil ones, they cannot properly be denominated worship.

The Patagonians, like some of the Indian tribes on the banks of the Oronoko, make skeletons of their *dead*. One of the most distinguished women of the deceased performs the dissection. The entrails are

burnt, and the bones, after the flesh has been cut away, are buried till the remaining fibres are decayed. Within twelve months they must be removed to the burial place of the family. This custom prevails with the Moluches, and with some tribes of the Puelches: but others expose the bones upon a frame-work of canes or twigs, to bleach them in the sun and rain. While the dissector is at work upon the skeleton, a party of Indians, covered with long mantles of skins, and having their faces blackened with soot, walk round the tent singing, in a mournful tone, and striking the ground with their spears, to drive away the evil spirits. If the widow and relations of the deceased be wealthy enough to pay for the ceremony, some of the Indians go to condole with them: but this is not a sort of condolence to be gratuitously offered. They expect a considerable recompence, for they prick their arms and thighs with thorns, and, at least, feel pain, if not sorrow. The horses of the deceased are killed, that he may ride upon them in the country of the dead; a few only are reserved to carry his bones to the sepulchre.

When the bones are to be removed, they are packed up in a hide, and laid on the favourite horse of the deceased. This horse is covered with mantles, feathers, and other ornaments; and in this manner, the friends and connexions of the deceased travel, with his remains, to the family burying place, which is sometimes three hundred miles distant, so wide are the wanderings of these people.

The Moluches and some other tribes bury their dead in large square pits about a fathom deep; the bones being put together and tied in their places, are then clothed in the best robes, and ornamented with beads and feathers, all of which are cleansed or changed once a year. The skeletons are placed in a row, and in a sitting attitude, with all the weapons and other valuables of the deceased. The vault is then covered over with branches and twigs, upon which earth is thrown. An old matron from each tribe is appointed to take

care of these graves. She opens them every year, and clothes and cleans the skeletons; for which she is held in great veneration. The bodies of the horses are placed round the grave, raised upon their feet, and supported by stakes.

Some of the tribes carry their dead to a great distance from their dwellings, into the desert by the sea-coast; and arrange them in order, above ground, with their horses round them. It is probable that they reduce them to skeletons only when they have to carry them to a considerable distance. In the voyage of discovery, made by the St. Antonio, from Buenos Ayres to the Strait of Magellan, in 1746, the Jesuits, who accompanied the expedition, found one of these tents or houses of the dead. On one side there were six banners, as they may be called, of cloth of various colours: each of these was about half an ell square, and was set upon a high pole fixed upon the ground. On the other side were five dead horses, stuffed with straw, and each supported on three stakes. Within the house they found two *ponchos*, or Indian garments, and the bodies of two men and one woman, on which the hair and flesh were still remaining. On the top of the house was another *poncho*, rolled up and tied with a coloured woollen band, and in this a pole was fixed, from which eight tassels of wool were suspended.

Widows in Patagonia are compelled to observe a long and rigorous mourning. For a whole year after the death of their husbands, they must keep closely shut up in their tents, must not have communication with any one, and must not go out except for the common necessaries of life. They must abstain from eating the flesh of horses, ostriches, and guanacoes, and from beef; they must never wash their face nor hands, but must blacken themselves with soot.

In this country the husband buys his *wife* of her relations, and then takes her as his property; but widows and orphans are at their own disposal. The lives of the women are one continued series of labour.

They fetch wood and water; they dress the food; they make, mend, and clean the tents; they cure the skins, and make them into mantles; they pack up every thing for a journey, load, unload, and settle the baggage; they carry the lance before their husbands; and, at the journey's end, they set up the tent. Even sickness does not exempt them from these labours; and it would be considered in the highest degree ignominious for their husbands to assist them.

The office of *chief*, or *ya*, as he is called, is hereditary, and all his sons may be chiefs, if they can prevail with Indians to follow them. The ya has the power of protecting those who apply to him, of composing or silencing disputes, and even of delivering up an offender to death. In all cases of this description his will is the law. These petty despots are esteemed in proportion to their eloquence; and a chief who is not eloquent has an orator to harangue the people for him. When two or more tribes form an alliance against a common enemy, they choose a commander from the ablest or most celebrated of their chiefs. The defensive armour of the Patagonians consists of a helmet made of a double bull's hide, and shaped like a broad brimmed hat; and a tunic or shirt, with short sleeves, made of skin, but three or four times folded. When on foot they use a large, square, and unwieldy shield, formed of bull's hide. Their spears are of cane, four or five yards long, and pointed with iron. Some of them possess swords, which they have procured from the Spaniards. The single and double sling they use both in battle and in hunting. The stone used for the former is about a pound weight: this they aim at their enemy's head: with, the double sling, they can fasten a man to his horse, and sometimes effectually entangle both man and beast.

Twentieth Day's Instruction.

Narrative of a Journey from Buenos Ayres, by Potosi, to Lima. By ANTONY ZACHARIAH HELMS, *director of the mines in Peru.*

BEFORE I speak of the river of La Plata and the province of Buenos Ayres, I will read to you an abstract which I have made of the travels of Mr. Helms, across the continent of South America, from Buenos Ayres to Lima. He had been appointed, by the Spanish government, to undertake the superintendance of the smelting-houses, and the process of amalgamation in Peru; and was accompanied by Baron Nordenflycht, a Swedish nobleman, who had received the appointment of director general of mines in the same country.

Attended by their families, a few negro servants, and several German miners, they reached Buenos Ayres about the middle of the year 1789; and, on the 29th of October, the commencement of spring in that quarter of the globe, they set out on their journey into the interior. They at first proceeded in carriages, and afterwards on horseback, by the common route of the post. Their course lay in a north-westerly direction.

Early on the ensuing day they arrived at *Escobar*, a village about thirty-six miles from Buenos Ayres. In the evening of this day Mr. Helms saw a great number of luminous insects, which, at first, he mistook for luminous exhalations arising from the marshy ground. On examination, however, they were found to be a kind of glow-worms, of oblong shape and brown colour, but twice as large as those of Europe.

Not long after this the travellers passed over the immense plains, called by the Spaniards *Pampas*. In these plains several of the post-houses had beautiful

orchards, planted with peach-trees, the only large kind of trees that were to be seen. The Pampas extend upwards of three hundred miles in a north-westerly direction, as far as the mountains of Tucuman, and more than fifteen hundred miles southward. They are fertile and covered with high grass; but are, for the most part, destitute of trees and uninhabited, except at the post stations. The heat is here so intense that the wild oxen, horses, ostriches, and other large animals, which frequent them, would probably perish, if they did not find shelter from the rays of the sun, beneath the shade of the grass. The numbers of wild animals that feed on the Pampas are incredible. Probably, says Mr. Helms, all Europe does not contain so many horses, oxen, sheep, ostriches, and game of various kinds, as are here to be found. The traveller who crosses them frequently sees, with astonishment, herds of from five to ten thousand, occupying different parts of the plain, as far as the eye can reach.

In the course of their journey the travellers saw, late in the evenings, large flocks of American ostriches, running about in different directions; and the attendants collected many of the eggs of these birds, each of which was as large as an infant's head. Some of the men put the eggs they had found into their hats; to their utter astonishment, a few of them were hatched there; and the young birds, running away into the grass, began to devour it with as much voracity as if they had long been accustomed to such a diet.

At *Esquina de la Guardia* the travellers observed a square fortification, on which were mounted two pieces of cannon. This had been constructed for the purpose of restraining the incursions of the Indians. In the country beyond Esquina they remarked, that the bed of one of the rivers consisted of decomposed granite, and that many high grounds were covered with native saltpetre, so thick as to appear like hoar frost. The bed of another river consisted of indurated marl, mixed with calcareous shells.

About seventy miles beyond Esquina, the travellers entered a wood, which extended as far as Cordova, nearly four hundred miles. In this wood only two kinds of trees were observed: they resembled the olive-tree of Spain; and their leaves were of a most beautiful green colour, but no fruit was seen upon them.

Mr. Helms remarks, that in the whole journey as far as Cordova, the places at which they changed horses, seldom consisted of more than the post-house and a few adjacent huts, inhabited by Creoles. These, which are descendants of the Spanish settlers, have a brown complexion, and large, black, and expressive eyes. In their moral character they differ much from their progenitors. Though born with genius and talents capable of attaining whatever enobles the human mind, yet, from a neglected education, they become indolent and licentious; hypocritical and infected with a blind and malignant fanaticism. Immoderately proud, the Creoles of this part of America are prepossessed against whatever is European; and particularly against the Spaniards. The Indians have long lived under the oppressive yoke of these people. The king of Spain has enacted many salutary laws, with a view to ameliorate the condition of the Indians; but, in many instances, either the Creoles have not suffered them to be promulgated, or, by their intrigues or artifice, they have rendered them of no avail.

Cordova is a neat and pleasant town, situated near a wood, at the foot of one of the branches of the Andes, and considerably hotter than Buenos Ayres. It is the see of a bishop, and is inhabited by about fifteen hundred Spaniards and Creoles, and four thousand negro slaves. The cathedral is a fine edifice; and the spacious market-place is adorned with buildings of considerable magnitude. The streets are paved and cleaner than those of Buenos Ayres. Cordova is a place much frequented by persons who trade between Buenos Ayres and Potosi.

During the short residence of the travellers at this place they were lodged in a large and massive edifice, which had formerly been a college of Jesuits, and subsequently had been used as the residence of the bishop. In the granite mountains of the adjacent country are found veins of lead and copper ore, several of which contain also silver.

From Cordova the travellers pursued their journey northward, along the foot of the Andes, the direction of which was from south to north. In the valleys they saw, for the first time, the American palm trees, which form one of their chief ornaments; and several of the mountains were observed to be composed of red and green granite, and to contain veins of corneous silver ore.

About three hundred and thirty miles north-west from Cordova, they entered the small town of *St. Jago.* This place had of late fallen into decay, in consequence of the trade which it once enjoyed, having been diverted into other channls. The heat of this place is almost intolerable, particularly when the wind blows from the equatorial regions.

The pleasant little town of *Tucuman* is somewhat more than a hundred miles north-west of St. Jago. It is surrounded by groves of citron, orange, fig, and pomegranate trees; is the see of a bishop, and contains three monasteries. The inhabitants are wealthy, and might derive infinitely greater advantage than they now do from the working of the numerous gold and silver mines, which abound in the adjacent mountains. But the persons employed in these mines were, at this time, so ignorant of the use of machinery, as to have all the ore carried out of them in sacks on the backs of negroes. Indeed Mr. Helms subsequently found that this was the practice at Potosi, and throughout the whole kingdom of Peru.

Beyond Tucuman the country was mountainous; and, in some parts, the road had been formed through thick forests. In one place the travellers passed the

bed of a river, part of which was encrusted with a white substance, in taste and appearance resembling common salt; and, from various other indications, they were led to conclude that there were extensive beds of fossil salt in several parts of the adjacent country.

The next town to Tucuman is *Salta*, situated on the bank of the river *Arias*. This place is divided into four principal streets, irregular in their appearance, but wider than those of Cordova. The market-place is a large square, on the west side of which stands a beautiful town-house, and on the opposite side is the cathedral. There are also in Salta several churches, and monastic establishments. When Mr. Helms was here the whole population, including Creoles and slaves, was estimated at about nine thousand persons. The inhabitants carried on a considerable trade with Potosi, Peru, and Chili, and they appeared to be more wealthy and civilized than those either of Cordova or Tucuman.

The travellers had arrived at Salta in carriages. These, however, it became requisite to change for saddle-horses, in order to prosecute their journey over the Andes, to the distance of eighteen hundred miles, and along the worst and most fatiguing roads that can be imagined. It was well for them that they had commenced this dangerous journey at the most favourable season of the year; for at any other season it would have been impossible for them to have forded many of the torrents which crossed their path.

A few hours after the travellers had left Salta, they began to ascend the higher regions of the mountains. Instead of suffering from intense heat, as they had before done in the valleys, they now experienced great pain from the cold. The wind, blowing over the snowy summits of the Andes, was extremely piercing. The woods, which had covered the less elevated ridges, now ceased to embellish the landscape. Having left these, the travellers were no longer incommoded by an almost

incredible multitude of locusts, crickets, singing toads, frogs, serpents, lizards, musquitoes, and ants.]

The ill-regulated and dirty post-houses, however, at which they were obliged to sleep, swarmed with bugs, fleas, and other vermin; and they were frequently compelled to quench their thirst with nauseous and fetid water.

Among the beasts of prey that are found in this part of the country, the jaguar or tiger, is said to be the fiercest and most dangerous. Mr. Helms, however, asserts, that the South American lion, though not much larger than a middle-sized dog, far supasses the jaguar in strength. In this country there are no domestic bees; and the wild bees do not, as in Europe, construct their nests in hollow trees, but fix them, in a curious manner, on the branches. Some of these nests are of an oval form, appear like balls of wax, and are about the size of an ox's bladder. At the small end there is an opening through which the insects enter; and in the interior they are full of cells containing the purest honey.

At the distance of somewhat more than forty miles north of Salta, Mr. Helms and his party arrived at *Yujui* or *Jujui*, a town containing about three thousand inhabitants. Hitherto they had proceeded chiefly along vallies. In some parts of the country the course of the rivers was extremely winding: this occasioned them much inconvenience; and one river, in particular, they had to cross thirty times within the space of twenty-four hours.

One hundred and forty miles beyond Yujui, they reached the highest ridge of the Cordilleras. This is the favourite haunt of several kinds of wild animals, but particularly of llamas and vicunas. In these mountains are found veins of quartz, containing gold, copper ore, lead ore, and iron, the terminations of which appear in many places on the surface of the ground. Near an Indian town, called *Mojos*, there

was a stratum of rich magnetical iron-sand, from which particles of gold of considerable size were sometimes obtained by washing.

After having passed a lofty mountain, the travellers descended towards a torrent, which they were obliged to cross more than fifty times during one day. In a hot spring, near *Caiza*, they found some small pieces of sulphur, and a kind of clay full of crystals of alum.

The road from Caiza to Potosi was the worst and most fatiguing of any over which the travellers had yet passed. They were exposed to heavy rain, and were often obliged to wade knee deep in the rivers; and the air was piercingly cold. Twelve miles from Potosi the ridge of the Andes began to decline towards the north; so that one of the rivers now flowed in that direction. The rivers they had lately passed all flowed toward the south.

With respect to the great chain of mountains which stretches from Tucuman towards Potosi, Mr. Helms says, that until he arrived within eighteen miles of the latter place, most of the valleys produced small trees and bushes, but that, beyond this, they were wholly destitute of wood. On the lofty precipices and declivities nothing grows but patches of green spungy moss, which serves as food to the llamas and sheep. At Potosi nearly all the wood that is used for fuel is brought from a distance of more than thirty miles; and larger trees, adapted for the timber of buildings, are dragged by men across the mountains. These are so scarce that a piece of timber sixteen inches square, and thirty feet long, would cost two hundred pounds sterling.

Mr. Helms was greatly astonished to find the highest snow-capt mountains, within nine miles of Potosi, covered with a stratum of granitic stones that had been rounded by the action of water. How, he asks, could these masses of granite have been deposited here, since there is a continual descent to Tucuman, where the ridge of granite ends, and since from Tucu-

man to Potosi, the mountains consist only of clay-slate? He seems of opinion, that they could only have been rolled hither by the general deluge.

The city of *Potosi* is about one thousand six hundred miles from Buenos Ayres, and stands in the midst of one of the most elevated ranges of the Andes, the summits of which are covered with snow*.

One of the mountains, at the foot of which the city is built, resembles a sugar-loaf in form, and is nearly eighteen miles in circumference. This mountain is chiefly composed of a yellow clay-slate, full of veins of quartz, in which an abundance of silver ore is found. More than three hundred *mines* or pits have been worked into it. Mr. Helms here found many different kinds of silver; and he remarks, that, if skilful men were employed, and proper machinery were used for clearing these mines from water, and in working them, they might be rendered very productive. But in all the operations connected with them; in stamping, sifting, washing, and roasting the ore, and, finally, in obtaining the metal from it, there are so much carelessness, ignorance, and want of skill, that a very great proportion of the silver is lost. All the implements of the Indian miner are unweildy and bad. His hammer, for instance, is a square piece of lead, of twenty pounds weight; and the iron a foot and a half long, is much too incommodious. Thick tallow candles, wound round with wool, are used in the mines, and these soon vitiate the air. In the royal mint at Potosi, where from five hundred and fifty to six hundred thousand marks of silver, and about two thousand marks of gold are annually coined, affairs were not at this time better conducted. Mr. Helms, and the persons by whom he was accompanied, were directed, by the governor of Potosi, to introduce such improvements as they might consider requisite. They accordingly proceeded to the erection of apparatus and machinery

* For an account of Potosi, see page 193.

of different kinds, but the total want of timber on the mountains around the place very much retarded their operations.

The revenue of the king of Spain, from the mines in the kingdom of La Plata, was estimated at this time to amount annually to about eight hundred thousand pounds sterling; and Mr. Helms remarks, that, if the conductors possessed more knowledge and more economy, this revenue might easily be doubled.

Baron Nordenflycht was obliged to reside some time at Potosi, to superintend the completion of the machinery for the mines; but Mr. Helms, with most of the Germans, set out for Lima on the 30th of January, 1790. Twelve miles south of Potosi they passed a hot sulphureous bath, with a boiling spring; and near the bath was a village, whither invalids from Potosi resorted for the recovery of their health. They subsequently passed over mountains of slate, of granite, and of sand stone; and afterwards entered a valley which, with little variation, extended more than six hundred miles to Cusco. A town in this valley called *Oruro*, was formerly the residence of wealthy capitalists, who had obtained their riches from the mines in the adjacent mountains. But, during a dreadful insurrection of the Christian Indians of La Plata and Peru, in the year 1779, many of the inhabitants were massacred, and the town was plundered and almost totally destroyed.

The rich town of *La Paz*, which the travellers next entered, likewise suffered during this revolt; but it had been restored, and now contained about four thousand houses, and twenty thousand inhabitants. Many of the persons, who resided at La Paz, derived considerable wealth from the culture of the *coca*, or tea of Paraguay, a greenish acid herb, which is much in request in these parts of America, and which the Indians chew, mixed with lime. This production is as indispensable to them as tobacco is to many persons in Europe.

The mountain at the foot of which La Paz has been built, is the loftiest in this part of the country; and its

summit is covered with everlasting snow. It abounds in rich gold ore, and a considerable quantity of gold is obtained from washing the sand of the torrents. About a century ago, a projecting part of it fell down, and the inhabitants severed, from the stone, lumps of pure gold, so large as to weigh from two pounds to fifty pounds each. Even at this day, large pieces of gold are found in the layers of sand, and other deposits washed from the mountain by the rains. In this and many of the adjacent mountains there are also rich veins of silver ore.

About fifty miles beyond La Paz the travellers came to the lake of *Titnaca*, the first expanse of fresh water they had hitherto seen in South America. From the time they had left the vicinity of Buenos Ayres, they had not passed through any country so beautiful or so picturesque as that which bordered this lake. They were delighted with the pleasing alternation of hills and dales, intermixed with the richest meadows imaginable, and depastured by numerous herds of cattle, mules, horses, and sheep. For many successive days they continued to travel along the shore of the lake, which, as they were informed, was near eighty miles in length. At the north-western extremity of it, they were ferried over a river about a hundred and twenty feet broad. The vessel which carried them was an Indian canoe, neatly constructed of a kind of reeds and grass, about an ell and half in width, and flat like a raft.

From the miserable state of the roads, and from the incessant rains, and dreadful storms of thunder and hail, which, at this season of the year occur among the mountains of La Plata and Peru, travelling along them is attended with almost inconceivable difficulty, and with innumerable hardships. Most persons at this season prefer travelling along the sea-shore. Here they have a serene sky, and no rain ever falls; but they are exposed to excessive heat, to troublesome vermin, and to dangerous fevers.

As Mr. Helms and his associates proceeded, the

country became more pleasant, fertile, and populous than it had before been. In one place they passed the broad arm of a river on a kind of flying bridge, made of basket-work.

A few days after this they entered the city of *Cusco*, formerly the capital of Peru, and the residence of the Incas. Cusco, like most of the large cities of Spanish America, has straight streets, which cross each other at right angles. The population was at this time numerous, but Mr. Helms was unable to obtain a correct statement of the number. A governor and a commander of regular troops and militia resided here. The cathedral was a fine stone building in the modern style, and contained many pictures and rich ornaments.

Although the mountains around Cusco contained rich metallic ores, yet only one person, a Frenchman, was at this time engaged in mining, and, from mismanagement, he had not been very successful. There was one ridge where the metallic veins, in many places, appeared openly upon the surface.

After the travellers had left Cusco, they reached a village called *Cocha-cajas*. Beyond this they ascended one of the loftiest of the Andes, and, on the other side, descended to a river, which they crossed. For seven hours they were exposed to incessant rain. Truly pitiable (observes Mr. Helms) is the fate of that traveller, who, during the rainy season, is obliged to pursue his journey by such steep and slippery roads, and over such mountains as these. Even the most thoughtless freethinker, who denies the existence of a Providence, would here be obliged to confess that an almighty and benignant Power evidently watches over the daring steps of mortals; otherwise both men and beasts must inevitably perish. All this part of the country abounds in veins of gold, silver, and other metallic ores.

From the summit of one of the ridges, the travellers, with great difficulty, descended towards a rapid stream, over which was a dangerous Indian hanging bridge, about one hundred and twenty feet in length, and sus-

pended by badly made hempen ropes. They were obliged to stop several hours till this bridge was repaired; and to pass the night in a cavern of the mountains, where, besides suffering from excessive heat, they were so dreadfully stung by musquitoes, that, in the morning, they scarcely knew each other.

A few days after this they arrived at the royal mine town of *Guancavelica*. In the vicinity of this place the mountains are so rich in gold, silver, quicksilver, copper, and lead, that, if the mines were wrought even with moderate industry and skill, they might be made to yield a greater quantity of the metals than would be requisite for the supply of the whole world. And, says Mr. Helms, it is perhaps a fortunate circumstance that the ignorance of the miners and the oppressive measures of the Spanish government should hitherto have prevented more from being drawn from this inexhaustible source than has been hitherto obtained, otherwise, in Europe, gold and silver must have been depreciated to an inconvenient degree.

Guancavelica is peculiarly celebrated on account of its rich quicksilver mine. This had however been wrought in the most ignorant manner imaginable. Yet, when Mr. Helms was here, though the pit had fallen in, and only part of the mine was accessible, it still produced annually about fifteen hundred weight of quicksilver. It will afford some proof of the ignorance of the persons concerned in this mine, when it is stated, that a thick stratum of red arsenic and yellow orpiment, which lay contiguous to it, was mistaken by the superintendant for cinnabar; and some hundreds of workmen perished in the operation of smelting it. The quicksilver is obtained from the kind of ore called cinnabar, the vein of which is not less than two hundred yards in extent.

From Guancavelica the road ascends towards the snow-covered heights of the Andes; and the atmosphere is intensely cold. Here the travellers saw large flocks of llamas and vicunas. For some time they continued to climb the snowy steeps; and, although within the

tropical regions, Mr. Helms was here more sensibly affected by the cold than he had ever been during the winters in Germany. They now traversed the highest ridge they had seen since they left Potosi, and, for a considerable distance, they passed over extended fields of snow and ice. At length they descended, by a steep road, to a narrow valley where the climate was so mild, and the soil so luxuriant, that it produced, in abundance, pomegranates, figs, citrons, oranges, pineapples, grapes, and other fruit.

Beyond this valley they reached the extremity of the Cordilleras, and entered a sandy plain, through which they continued their journey towards Lima. In passing over some of the plains between the sea-shore and the mountains, they observed on the ground an incrustation of common salt, more than an inch in depth. This was collected for sale by the inhabitants of the adjacent villages.

From Potosi to *Lima* the distance is about one thousand two hundred and fifteen miles. Sixty years before Mr. Helms was here, Lima was one of the richest and most flourishing cities of South America; but, after that time, the markets were so overstocked with European merchandize, that the capitals of most of the commercial houses became invested in piece and other goods, and all the ready money by degrees emigrated to Cadiz. This necessarily occasioned a fall in the value of European commodities. A pair of French silk stockings, which before had cost more than seven pounds sterling, could have been purchased, when Mr. Helms was here, for about a pound; and, in like manner, all European goods had sunk excessively in value. The same is said to have been the case in all the other commercial cities of Spanish America. The consequent scarcity of money caused an almost total stoppage in the working of the mines; and it seemed as if this source of wealth in Peru would be wholly destroyed. To counteract the effects of so injurious a state of public affairs, the viceroy, an intelligent and disinterested man, had requested

of the Spanish government to send to Peru some skilful miners and mineralogists from Germany. In the meantime he formed, at the expense of the proprietors, a supreme tribunal of the mines. But, on the arrival of Mr. Helms in Peru, this gentleman found that the members who composed this supreme court were entirely destitute of mineralogical knowledge, and that no means whatever had been taken for promoting the working of the mines under their jurisdiction.

Mr. Helms continued only three weeks in Lima, at the end of which time he was directed by the viceroy to proceed to *Guancavelica*, for the purpose of introducing some improvements in the management of the furnaces at that place. Having received his commission and instructions, he left the capital, and, accompanied by his family and by five German miners, he arrived at Guancavelica on the 6th of May, 1790. The sudden transition from the hot climate of Lima, to the cold regions of the mountains, threw his wife, his servants, and the miners into an intermittent fever, from which some of them did not recover till several months afterwards.

Here Mr. Helms, in all his operations, was opposed by the governor of the place, an interested old man, who sought to make an undue profit for himself out of the buildings and improvements which were commenced. And, notwithstanding all the benefits that would have been derived to the government, from the completion of them, Mr. Helms was at last compelled to suspend his operations.

About the end of the year he received an order, directing him to proceed to the province of Tarma, for the purpose of superintending the mines of Pasca. Consequently on the 14th of January, 1791, he left Guancavelica. At the distance of about eighteen miles, he descended into a deep valley, near which he crossed a broad and rapid river, over a neat stone bridge. Beyond this the valley became broader, and was extremely pleasant and fertile. On each side of the river were many towns and villages, inhabited by Spaniards, In-

dians, and Creoles. One of these, called *Guanjaia*, contained a parish church, a chapel, and several well-built houses, belonging to the rich landholders of the district.

Tarma, the capital of a district of the same name, is situated in a deep and narrow valley, inhabited chiefly by Creoles, Mestizoes or Mestees, and Indians. The adjacent country is fertile, but the climate is unhealthy, for the surrounding high mountains prevent a free circulation of air. Near Tarma were two quicksilver mines, but, at this time, they were only a few fathoms deep. There were likewise two veins from which antimony and white silver ore were obtained; and, in several places, the inhabitants dug nitre of excellent quality.

About fifty miles north-west from Tarma is *Pasco*, a small town, in the midst of a country of mines, and where some wealthy proprietors of mines resided. About six miles distant from it is a mountain called *Lauricocha*, which contains a prodigious mass of iron stone, interspersed throughout with pure silver. This mass is half a mile long, about the same breadth, and near ninety feet deep. But, when Mr. Helms was here, so much unskilfulness and mismanagement prevailed, in the different processes of extracting the silver, that a great proportion of it was lost. In the midst of this mass of ore, he says there was a stratum of white metallic clay about eight inches thick, which contained a great proportion of silver. This circumstance had induced many needy and ignorant adventurers to perforate the great mass of ore with innumerable holes, without order or regulation, so that it was wonderful the whole mine had not fallen in. When Mr. Helms was here, more than two hundred private proprietors and workers of mines had pits in this mountain, and annually extracted from it about two hundred thousand marks of silver.

After Mr. Helms had spent two months in examining into the state of the mines and smelting houses at this place, he drew up, and transmited to the viceroy, a re-

port, in which he pointed out all the defects he had observed; he, at the same time, proposed what he thought the best means for rendering these mines productive, and the working of them permanently advantageous. But all his exertions to effect any improvements were ineffectual; and, after a vain and ineffectual perseverance for some time longer, he resolved to give up his commission and return to Europe.

Hitherto Peru had been a land both morally and physically injurious to him. He had sacrificed his health to a conscientious discharge of his duty. In the execution of the most dangerous and laborious commissions, he had been obliged to act not only as a director of the smelting-houses, but likewise as a carpenter, a smith, and mason; and he had endeavoured, by every means in his power, to dispel the incredible ignorance and barbarism which prevailed in the mint and mining departments. The overseers and officers of the mines, however, whose want of skill and whose malpractices he had exposed, counteracted all his projects for the public good; no exertions were left untried that were likely to injure him. Both in writing and in conversation they decried the Germans as protestants, heretics, Jews, and cheats; as men, in short, who, it was to be feared, would corrupt the morals of the miners and overseers. They even excited the Indian labourers against them, by insinuating that the foreigners had come into Peru for the purpose of working the mines solely by machinery, and thus depriving them of the means of subsistence.

Mr. Helms concludes his account of this country with a few general observations relative to gold and silver mines of La Plata and Peru. These, he observes, are here the chief source of riches. The inland trade of the provinces is inconsiderable, on account of the want of culture and the thinness of the population; and the foreign commerce is almost entirely in the hands of Europeans. Nearly all the mines in Peru, he says, were first opened by deserters from the army and

navy, and by other persons without capital. These mines continued to be worked, without any observance of the mine-laws and regulations, and when Mr. Helms was here, most of them were in this wretched condition.

From the 1st of January to the 31st of December, 1790, there were coined, in the royal mints of Lima, Potosi, and St. Jago, gold to the value of about three hundred and thirty thousand pounds, and silver to the value of one million eight hundred and forty thousand pounds sterling. In the mints at Mexico, he says the value of the gold and silver coined during the same period was about three million three hundred and twelve thousand pounds. If to these sums be added the value of the gold and silver that is fabricated into various utensils for churches, convents, and private persons, and of such as are clandestinely exported by merchants without being coined, it is supposed that the whole annual produce of La Plata, Peru, and Mexico, would amount to little less than nine millions sterling per annum.

Twenty-first Day's Instruction.

BUENOS AYRES, OR LA PLATA.

This is one of the most extensive of the Spanish viceroyalties. Towards the south and north its limits are not exactly defined; as it stretches into extensive deserts that are inhabited only by savages, and are little known. Its southern boundary may be considered to reach from *Cape Lobos* westward to the river *Colorado*. On the north it is bounded by *Amazonia;* on the east by Brazil and the Atlantic ocean; and on the west by the great ridge of the Cordilleras, which separates it from Chili and Peru. Its extreme length is upwards of sixteen hundred miles; and its greatest width nearly a thousand. It was erected into a viceroyalty in 1778,

at which time several districts were added to it from Peru and Chili.

La Plata is divided into five governments or provinces of, 1. Buenos Ayres or the Rio La Plata; 2. Paraguay; 3. Tucuman; 4. Los Charcos; and 5. Cusco. Of these the three last have been already described *.

The province of *Buenos Ayres* has been indebted for its name, to the salubrity of its climate. It enjoys nearly the same temperature throughout the year; but is subject occasionally to thunder storms, and to rains of long continuance. This province extends on each side of the Rio La Plata, or 'river of silver,' as it was called by Sebastian Cabot, who, at the head of some Spanish sailors, on the banks of the Paraguay, defeated a body of Indians, and took from them an immense booty of gold and silver. The name of La Plata was applied by Cabot to the whole channel of the Paraguay, from its source to the ocean; but it is now confined to the gulf which extends, from the junction of the *Uraguay* and *Parana*, to *Capes St. Maria* on the north, and *St. Antonia* on the south. Between these points the Plata is nearly one hundred and fifty miles wide. But this noble expanse of fresh water, which is without a parallel in the world, is deformed by rocks and sand-banks, that render its navigation both difficult and dangerous; and it is exposed to impetuous torrents of wind, called *Pamperos*, which sweep, with dreadful fury over the vast plains of the Pampas.

The soil of Buenos Ayres, near the capital, and on the north side of the river, is in general rich and productive, requiring but little labour and no manure, to make it yield an abundance of wheat and maize. In this country also most kinds of European fruits, such as grapes, melons, figs, apples, pears, peaches, and cherries grow, intermixed with the productions of warmer climates, such as Pimento, oranges, and pineapples. On the south of the river, and extending nearly nine hun-

* In pages 196—201.

dred miles towards the north-west, are the immense plains of the *Pampas*, which present a sea of waving grass, with very few interruptions of wood and eminences. The luxuriant and nutritive herbage of these plains affords pasture to innumerable herds of cattle, which rove unowned and unvalued, and which are pursued by the Spaniards for their hides and tallow only. These plains are also the abode of immense troops of wild horses and deer, ostriches, and other animals.

The only route between Buenos Ayres and Chili lies across the Pampas. The Spaniards generally perform this journey in large companies, as the plains are infested by tribes of savage Indians, who occupy themselves in hunting wild horses, and who rob such travellers as they can surprize and overpower. Through this extensive flat there are no landmarks nor traces by which a road can be discovered, so that travellers are obliged to steer their course by means of the mariner's compass. The persons who traverse it, generally proceed in covered caravans drawn by oxen, and are accompanied with baggage horses and mules. These caravans are rendered almost as commodious as houses. They have doors to shut, and windows on each side; and the floors are covered with mattrasses, on which the passengers sleep during the greatest part of the journey. Travellers, however, are sometimes reduced to great distress, both from intense heat and from scarcity of water. The road from Buenos Ayres to Peru is very different from that to Chili. Post houses are erected at different stages, where both horses and carriages are provided for travellers; and as no wild and unsubdued Indians frequent that tract, there is no danger from sudden surprise.

The principal rivers of Buenos Ayres, besides the Plata, are the Paraguay, the Parana, and the Uraguay. Of these the *Paraguay*, though its channel is in general narrow, is navigable by small vessels as far as the sixteenth degree of south latitude. It has an annual inundation, which commences about the end of

February, and continues gradually to increase till the end of June, when it again diminishes. The *Parana* has its source among the mountains of Brazil. This river, descending by a rapid but long and diversified course, is swelled by numerous tributary streams. At *Corrientes* it receives the Paraguay, and their united waters running southward for many leagues, at length fall into the Plata. The *Uraguay* rises in the mountains which stretch along the eastern coast of America, opposite to the island of *St. Catherine*. Flowing towards the west, through a naked and desert region, it then takes a southerly direction, and, traversing the immense forests of Guarana, it passes through a rich and romantic country; and, near the thirty-fourth degree of south latitude, unites with the Parana, to form the river Plata. Though this river is not equal in length, either to the Paraguay or the Parana, yet, at the distance of near seven hundred miles above its confluence with the Parana, a ten-oared boat requires half an hour to cross it. From the rockiness of its channel, and the turbulence of its stream, the Uraguay is difficult of navigation, except for *balzas*, a species of craft peculiar to South America.

Buenos Ayres is the capital of the province; and *Monte Video*, a town on the northern bank of La Plata, formerly belonged to it.

In the year 1806, during the late war with France and Spain, a British squadron, commanded by Sir Home Popham, entered the Plata. A force was landed under the command of Major-General Beresford, for the reduction of *Buenos Ayres*. Some resistance was offered by the Spaniards, but, in the end, the general entered the town with little opposition. The British force, however, proved so inadequate to the retention of the place that, after they had been in possession of it about six weeks, they were assailed by such a superiority of force, that they were compelled to surrender themselves prisoners of war. In the month of May, 1807, a reinforcement of eight thousand men arrived, under the command of General Whitelocke; and Monte Video having pre-

viously been taken by Sir Samuel Auchmuty, these troops were directed to land and march against Buenos Ayres. They entered the town; but, immediately afterwards, were assailed, from all quarters, by the inhabitants and the country troops. One-third of the British army was either killed, wounded, or captured without any important advantage being obtained. On the ensuing day, an armistice was concluded, which ended in an agreement that the English troops should evacuate the country in two months; and that all prisoners taken on both sides should be restored.

Subsequently to this ill-conducted and ill-fated enterprize, and, during the occupation of Spain by the troops of Buonaparte, the inhabitants of Buenos Ayres resolved to effect their independence; with this view the Spanish governor was superseded by a governor of popular appointment, and, after a short struggle and some partial reverses, their endeavours were crowned with success. *Monte Video* continued, for some time afterward, to adhere to the Spanish government, but it was subsequently taken possession of by the forces of the Portuguese in Brazil. And, since this period, both Monte Video and Buenos Ayres have been wholly lost to Spain.

Account of Monte Video and the adjacent Country. Taken chiefly from Travels in Brazil, by JOHN MAWE.

THIS is a tolerably well built town. It stands on a gentle elevation, at the extremity of a small peninsula, on the northern bank of the river Plata, and is walled entirely round. Most of the houses are only one story high, are paved with bricks, and have very few conveniences. On one side of the great square is the cathedral, a handsome structure, but awkwardly situated; and, opposite to it, is an edifice divided into a town-house and a prison. The town stands on a basis of granite; and the streets, not being paved, are always

either clouded with dust or loaded with mud. In dry seasons, the want of conduits for water is a serious inconvenience at Monte Video, for a well from which the town is principally supplied, is two miles distant.

Provisions are here cheap and in great abundance. Beef in particular is very plentiful, though rarely either fat or well flavoured. Such, indeed, is the profusion of flesh meat, that the vicinity of the town, for two miles round, presents, at every step, the most disgusting spectacle imaginable, of bones and raw flesh. These afford food to immense flocks of marine birds; and, during the summer, breed myriads of flies. The latter are a great annoyance to the inhabitants, who, at table, are often obliged to have a servant or two continually employed in fanning the dishes, to drive away these nauseous intruders.

The inhabitants of Monte Video are estimated at fifteen or twenty thousand. The men are, for the most part, extremely indolent. To sleep, talk, smoke segars, and ride on horseback, are the occupations in which they pass three-fourths of the day. The ladies, however, are in general affable and polite: they are fond of dress, and are neat and cleanly in their persons. In their houses they adopt the English style of dress; but, when they go abroad, they are usually clad in black, and are always covered with a large veil or mantle. They are all Roman Catholics, and, at mass, they appear in black silk, bordered with deep fringes.

The climate of this country is humid. During the winter months of June, July, and August, the weather is sometimes very boisterous, and the air, at that season, is generally keen and piercing. In summer the serenity of the atmosphere is frequently interrupted by tremendous storms of thunder, lightening, and rain. The heat is intense, and to strangers is rendered the more unpleasant by the swarms of musquitoes, which infest every part of the place.

The harbour has a bottom of soft mud; and, though shallow, is the best in the river. The chief trade of

Monte Video consists in hides, tallow, and dried beef. The two former of these articles are exported to Europe, and the latter is sent to the West Indies, and especially to the Havannah. Coarse copper from Chili, in square cakes, is sometimes shipped here, as well as a kind of herb called *matté*, from Paraguay, the infusion of which is as common a beverage in these parts as tea is in England.

In the vicinity of the town the country is agreeably diversified with low and gently sloping hills, and long valleys, watered by beautiful rivulets; but the prospects they afford are rarely enlivened by traces of cultivation. Few inclosures are seen except the gardens of the principal merchants. Some wood grows on the margins of the rivulets, and this is used in the building of hovels and for fuel. About thirty miles from Monte Video there is a pleasant stream, the banks of which seem to invite the labour of the planter, and might be made to produce an abundance of timber.

Mr. Mawe was in Monte Video at the time that the British expedition, commanded by General Beresford, arrived in the Plata. He had previously been imprisoned for having engaged in what was considered an illegal commercial speculation; and he was now ordered again into confinement. Permission, however, was subsequently obtained for him to go into the interior of the country; but it was stipulated, that he should not approach within a hundred and twenty miles of the town.

Under a sufficient guard he set out for the place of his temporary banishment; and, in the course of the journey, his attention was principally engaged by the wild and solitary aspect of the country. About seventy-five miles, north-east from Monte Video, he observed an irregular ridge of granite mountains, and remarked that the country, from this distance, gradually assumed a rugged appearance. The ravines of the stony wilds, and the wooded margins of the rivers, afforded shelter to many ferocious animals. The farms, in this district, for the most part, included tracts of land, from twenty

to thirty miles in length, and ten or twelve in width; and on most of these farms vast herds of cattle were bred.

At the distance of about one hundred and twenty miles from Monte Video, the hills gradually disappeared. Mr. Mawe now reached a district intersected by numerous rivulets. It was in this part of the country that he was permitted to reside, and, as soon as he had become thoroughly domesticated in his new abode, he made several excursions into the surrounding districts. The country in general was stony and mountainous; and the mountains and rocks were of granite. Hitherto he had not discovered any veins of metallic substances; but fine red and yellow jasper, calcedony and quartz, were not unfrequently found loose upon the surface. Mr. Mawe states, that much limestone is found and burnt here, and is sent in sacks, made of raw hides, to Monte Video, Buenos Ayres, and other places. The cavities of the limestone rocks afford refuge for many kinds of reptiles, particularly rattlesnakes. The banks of the streams are thickly covered with trees, rarely, however, of large size, for numerous creeping plants, interweaving with the shoots, check their growth, and form an impenetrable thicket. Here great numbers of cattle are bred. Some of the estates are stocked with from sixty thousand to two hundred thousand head of them. They are guarded principally by men from Paraguay, called *Peons*, who live in hovels built for them at convenient distances. As many as ten thousand head are sometimes given into the care of four or five Peons, whose business it is to collect the cattle together every morning and evening. Breeding alone is attended to here: neither butter nor cheese is made, and milk is scarcely known as an article of food. The constant diet of the inhabitants, morning, noon, and night, is beef, eaten almost always without bread, and frequently without salt. With this the inhabitants drink copious draughts of an infusion of their favourite herb, called *matté*.

The dwellings of the Peons are in general very wretched, the walls being formed by a few upright posts, interwoven with small branches of trees, and plastered inside and out with mud: the roof is thatched with long grass and rushes. The furniture of these poor hovels consists of a few scalps of horses, which are made to serve for seats; and of stretched hides to lie upon. The principal cooking utensil is a rod or spit of iron, stuck into the ground in an oblique position, so as to incline over the fire. The beef, when spitted on this instrument, is left to roast till the part next the fire is supposed to be done enough; and the rod is occasionally turned till the whole is cooked. The juices of the meat, by this mode of roasting, serve as fuel to the fire. Wood is so extremely scarce, that, in some parts of the country, mares, which, here, are never trained to labour, are frequently killed for the sake only of their hides and tails, and the rest of their carcasses are used for fuel. The offals and bones are often scattered round the huts: here they engender an infinite number of flies and noxious insects; and collect a multitude of ravenous birds, which almost deafen the inhabitants by their cries.

[The dress of these people corresponds with the filthiness and meanness of their habitations. Few of them have a shirt. A cloak, consisting of a piece of coarse woollen or cotton cloth, about three feet long, and two feet broad, with a hole in the centre, for the head to pass through; a hat, a pair of drawers, and half boots formed of the skins stripped from the legs of their cattle, constitute the whole of their clothing. The dress of the women consists merely of a shirt without sleeves, bound round their waist with a girdle. They have seldom more than one at a time; and, when it requires washing, they take it to the nearest brook, and, after that operation is performed, they wait till it is dry.

These people are extremely dexterous horsemen. Indeed they scarcely know what it is to walk to great distances. From their infancy, riding is their only instruc-

tion and amusement; and they become so habituated to this exercise, that they are able to keep their seat even upon the most ferocious animals. All their principal operations are performed on horseback. They collect their herds at full gallop: but, from the extent of some of the pastures, the cattle are nearly in a wild state. The common mode of slaying them is to drive a certain number of them into an inclosure, where the herdsmen assemble on horseback, each armed with a long rope, a knife, and a spear, having a crescent-shaped head. As many beasts are then turned out as there are men in waiting, and each man pursues one of them. If the bullock be swifter than the horse, the herdsmen, with wonderful dexterity, throws his catch-rope round the neck of the animal, or entangles one or two of his legs, by which he is easily secured. The animals are thrown down by being hamstrung, or cut with the spear across the tendon of one of the hind legs; and he is then dispatched with a knife. These people fish on horseback; carry water from the wells on horseback; and even attend mass on horseback, for they remain at the church door, which is left open for the purpose of their hearing the service.

Bred in the desert, they hold little intercourse with society, and they are scarcely superior in knowledge to the brutes with which they are surrounded. Uneducated, and under no law nor restraint, they give full scope to the indulgence of all their desires. They are bound by no ties of friendship for each other, nor of gratitude toward their masters; and, accustomed, from their infancy, to the slaughtering of cattle, they become so habituated to blood, that they are often guilty of murder even on the slightest provocation.]

The horses in this country are extremely spirited, and perform almost incredible labour. They seldom work more than a week at a time, after which they are sometimes turned out to pasture for several months. Their sole food is grass; and the treatment they receive from their owners is most harsh and unfeeling. They are

frequently galloped till they drop down through fatigue and exhaustion. They are never shod, and both the saddle and bridle are large, heavy, and inconvenient. Trained horses are here sold at the rate of from twenty to thirty shillings sterling each; and, cattle, by the herd of a thousand, for about nine shillings each.

Though this part of America is extremely fertile, and capable of producing an abundance of vegetable food, yet the inhabitants are so negligent, that it is very rare to find an inclosure even for a kitchen garden. The open ground on which they grow corn, is generally ploughed by two oxen, yoked to a crooked piece of wood, pointed at one end. After the ground has thus been rooted up, the wheat is sown. But no previous attempt whatever is made to clear away or destroy the noxious weeds; and when the corn grows up it is never weeded. Indian corn, beans, melons, &c. are all treated in a similar way. The grain is trodden from the ears by spreading them out in large circular inclosures, and driving horses among them. It is winnowed or separated from the chaff, by being poured out from baskets before the wind. After this the grain is kept in bags formed of raw hides. It is obvious that, by this mode of separating the grain, a considerable portion of it must be bruised and lost, and that much of the remainder must be rendered extremely impure by mixture with a large portion of earth, which the wind does not blow away. These people are totally averse to any plans for improving their means of subsistence, and seem to wish for nothing beyond the mere necessaries of life.

Tigers, jaguars, ounces, and other beasts of prey, and innumerable wild animals of other kinds, abound in almost every part of this vast territory. It contains numerous herds of small deer, but the inhabitants cannot hunt them, as their dogs are good for nothing. Eagles, and other rapacious birds, are found in great numbers. Parroquets are often seen in immense flocks, as well as pigeons, partridges of different kinds, wild

ducks, and wild turkeys. The rivers produce tortoises and other amphibious animals, and several kinds of fish.

After Mr. Mawe had resided six months in this remote district, Monte Video was taken possession of by the British troops under the command of Sir Samuel Achmuty, and, with some difficulty, he obtained permission to return and join them.

Before we leave this place we must speak of a singular tribe of wandering or itinerant guitar players, called *Gauderios*, who ramble from village to village, and find no difficulty in obtaining subsistence. Such is the mildness of the climate, that they are regardless of any particular clothing; and the multitudes of horses every where to be met with, afford them the advantage of always pursuing their journeys without fatigue.

The Gauderios are a free, joyous, and original race, who have few wants. A piece of half-roasted beef, which is here to be obtained at any hour, constitutes the whole of their usual food. Yet, when opportunity offers, they do not hesitate to avail themselves of a more delicious repast; and the abundance of cattle is such, that they sometimes feast agreeably to their palate. In this case they will kill a cow, for the sake only of the ribs, the marrow-bones, or the tongue, making no use of the remainder of the carcase, unless it happen that they can conveniently roast it. If they be able to do this, they proceed in the following extraordinary manner. The animal is slaughtered and well cleansed, and the tallow is carefully cut away, and crammed into the interior of the body. After this a fire is kindled beneath, and kept up for eight or ten hours, till the flesh on the ribs is perfectly roasted. The Gauderios then seat themselves round, and, without either salt or bread, devour as much of it as they are able. The rest is left on the spot, and becomes the food of birds of prey.

Buenos Ayres.

On the opposite or south side of the river La Plata, and at the distance of about one hundred and twenty miles from Monte Video, is *Buenos Ayres*, the capital of the viceroyalty. It is a large and populous city, containing about three thousand houses, and forty thousand inhabitants. Buenos Ayres was originally founded by the Spaniards in the year 1535; but the colonists were so reduced by famine, and harassed by the incessant hostilities of the neighbouring Indians, that, about four years afterwards, the place was abandoned as untenable. In the year 1580, however, the colony was re-established; and, in 1620, it was erected into a bishopric, and was constituted the capital of the province.

The city is built with great neatness and regularity; and is watered by several streams which fall into the Plata. The principal *streets* display both taste and opulence: they are broad and straight, and have footpaths on each side; but, from the great scarcity of stone, they are unpaved in the middle. The latter circumstance renders walking through them very inconvenient, during dry weather, from the quantity of dust which is collected, and is continually flying about. The *houses* are generally built of bricks or chalk, and with flat roofs, but they are seldom more than one story high. Many of them have parapet walls on the top, so as to admit of the inhabitants walking upon them for exercise. The interior of these houses corresponds very ill with their neat external appearance. During summer, the rooms are covered with matting, and in winter with European carpets; but, from the indolence of the inhabitants, they are seldom kept clean. That part of the town which is inhabited by the lower classes, and by the negroes, is excessively filthy. Most of the principal houses are surrounded by gardens; and many of them have balconies with lattice-work, for containing shrubs and flowers. Buenos

Ayres contains a spacious square or parade, surrounded with fine buildings. On one side of it is the palace of the governor, and a royal chapel: on the side opposite is the town-hall, and on the west side stands the *cathedral*, a new and spacious edifice, with a cupola and portico of elegant workmanship, but having its interior too profusely decorated with carved and gilt work. On the side which fronts the river, is the castle or fort, containing about forty pieces of cannon, and garrisoned by seven hundred men. In one of the *churches* of this place, there is a singular and beautiful picture of the Last Supper, the performance of an Indian. The frame is composed entirely of feathers of bright gold colour, so contrived as to imitate the most correct carving and gilding, and the difference cannot be discovered even by the nicest observer till it is touched. There are, in this place, several monasteries and two convents; two hopitals, one for men and the other for women, an orphan hospital, a foundling hospital, and a college, where grammar, philosophy, and theology, are taught. These edifices are all constructed of a beautiful white stone, which is found at a little distance from the city, and which gives to them a light and elegant appearance.

The *environs* of Buenos Ayres, for the distance of about nine miles, present a beautiful and well cultivated country, full of gardens and groves, and diversified with fields of wheat and maize. Here almost every person, who is in affluent circumstances, has a country house, and a large garden, which supplies him with many of the necessaries of life, and with a great variety of fruits and plants. Beyond these fields are immense tracts of meadow, that are covered with continual verdure, and filled with innumerable herds of wild horses and oxen.

Provisions are here extremely cheap. It is said that about a thousand head of cattle are daily slain near Buenos Ayres, for the use of the city; and that a large ox may be purchased for about five shillings sterling.

All the wine that is consumed by the inhabitants is imported from Spain or other countries.

Buenos Ayres is a place of deposit for articles of *commerce* to and from Chili and Peru. Its *port*, however, is exposed to almost all winds; consequently it is dangerous for vessels of burthen to approach near the town. These are loaded and unloaded by boats, which deliver their cargoes on the bank of a small creek. The goods are thence conveyed in carts to the warehouses or other places where they are to be deposited.

In their manners and general habits the *people* of Buenos Ayres resemble those of Monte Video. The facility with which even the lowest of the inhabitants are able to obtain a livelihood without toil, and the many opportunities which all classes possess, in this fertile and productive country, of acquiring a fortune, have greatly tended to encourage them in listlessness and inactivity. Both the men and women dress in the Spanish manner; and, as long as the place continued under the Spanish government, the fashions of Cadiz were followed, but generally some years after they had prevailed in the mother country. The ladies of Buenos Ayres are esteemed the handsomest and most agreeable of all the women in South America.

The *climate* of this place is, in general, extremely healthy. In June, July, August, and September, however, fogs arise from the river, which affect the lungs of the inhabitants; and the vehement winds that blow from the pampas or plains, prove very troublesome.

Paraguay.

If, from Buenos Ayres, we ascend the river Parana, we soon afterwards enter the province of *Paraguay*, one of the most opulent districts of La Plata. For its opulence it is indebted, not to mines of the precious metals, but to the richness and excellence of its vegetable productions. The climate is in general temperate and agreeable. The trees are clad with unfading ver-

dure; and the extensive plains are covered with the richest pasture imaginable, and are enlivened by herds of horses, mules, and cattle, and extensive flocks of sheep. The lands of this country produce wheat, rice, Indian corn, cotton, sugar, and all kinds of fruit. But its most remarkable production is a shrub belonging to the Linnæan genus ilex, the leaves of which are dried and used for tea. A considerable trade in this article is carried on with other countries; and it has been estimated, that the annual value of this kind of tea, sent to Peru, exceeds a hundred thousand pounds. The inhabitants of Paraguay also carry on a considerable trade in wax and honey. The population of this province is estimated at thirty or forty thousand families.

In different parts of it there are extensive forests, long ridges of mountains, morasses, stagnant pools, and low lands, which are covered with water during a considerable part of the year. In the level and open tracts, the air is serene in summer and the heat is excessive; but in winter, rain, storms, and thunder are frequent.

The capital of this province is *Assumption*, a small and irregularly built town, situated in about twenty-four degrees forty-seven minutes of south latitude. This place is the residence of a governor and the see of a bishop. Its houses are dispersed in the midst of gardens and plantations, along the bank of the river Paraguay; and it contains about seven hundred inhabitants. The environs are fertile, and produce, in the highest perfection, a great variety of native and exotic fruits. Near this city is a lake, which is remarkable for having, in the middle of it, a rock, that rises to a prodigious height, like an obelisk.

Some of the southern parts of Paraguay are inhabited by a warlike tribe of Indians, called *Abipons*. These are about five thousand in number; and occupy much of their time in breeding horses, and in catching and taming such of these animals as are wild. Their

weapons are arrows and lances, three or four yards long, which are sometimes pointed with iron. The warlike spirit of the Abipons has rendered them formidable to the Spaniards, and the missionaries have had little success in endeavouring to convert them to the Christian faith.

The women of this nation are not much browner than the Spanish females. The features of the men are regular, and their noses are prominent: some of them have even aquiline noses. The men have a custom of tearing away the hair from their forehead, so as to render themselves bald. They also tear out their beard; and mark their forehead and temples with scars, by way of ornament.

The Abipons do not appear to have a plurality of wives. When they marry, the men purchase the females from their parents, at the price of four or five horses, or a few clothes made of pieces of cloth of different colours, and, in appearance, somewhat resembling turkey carpet. The women are said sometimes to adopt the barbarous custom of murdering their children.

It is asserted that the Abipons believe in the existence of a demon or evil spirit; and that they have a kind of priests, or magicians, to whom they attribute the power of appeasing this imaginary enemy of the human race. It is probable that this evil spirit is considered by them as the Supreme Being, to whom they only pay a sort of worship when they think him angry.

The Abipons generally bury their dead under the shade of a tree; and, when a chief or warrior dies, they kill his horses on his grave. Some time afterwards they dig up his remains, and convey them to a more secret and distant place. It is evident that they have some notion of a future life; for, on burying their dead, they inter with them provisions and a bow and arrows, in order that they may procure for themselves a subsistence in the other world; and that they may

not be induced, by hunger, to return to this world, for the purpose of tormenting the living.

Another of the tribes of Paraguay are called *Manacicas*. This people are industrious. They live under a government, the customs of which have a singular resemblance to those of the islanders of the Pacific Ocean. Their cacique, or chief, possesses sovereign authority. His lands are cultivated and his houses are built at the public expense. The table of the cacique is always covered with the best produce of the country, and is supplied with every thing free of expense. No important undertaking can be commenced without his permission. He punishes severely all those who are guilty of any offence, and his subjects cannot call him to account for any of his actions. The women are subject to the control and submit to the authority of the principal wife of the cacique. All the individuals under his government, pay him a tithe of the produce of their hunting and fishing; and they can neither catch animals nor fish without his permission. The authority of the Manacican cacique is hereditary. As soon as the eldest son is of age to command, his father makes over his authority to him without ceremony; and this voluntary renunciation of his right, increases the love and respect of the people for their former master.

The mythology of the Manacicas differs from that of most other Americans. They believe in three Supreme Beings, who are said to show themselves, at times, in dreadful forms, to such of the Indians as, on certain occasions, assemble in the hall of the cacique to drink and dance. Their arrival is announced by a great noise, and, as soon as they appear, the people cease their diversions, and put forth shouts of joy. The deities are said then to address them with an exhortation to eat and drink well; and they promise them an abundance of fish, game, and other valuable property. Then, to do honour to the feast, they demand

something to drink, and empty the goblet that is presented to them, with a quickness which astonishes all the beholders. It may easily be believed that all this is the contrivance of the priests, or maponos, as they are here called.

The priests of the Manacicas occasionally act as oracles. They announce scarcity or abundance, storms or fine weather. They often excite the people to war, and never fail to demand for their gods a portion of the spoil. This people believe that the soul is immortal, and that, on leaving the body, it is conveyed to heaven by the maponos, to live eternally in happiness. As soon as an Indian dies, the neighbouring mapono disappears for a certain time; and, at his return, he states, that, during his absence, he has been employed in conducting the soul of the deceased to the regions of bliss. His journey is imagined to be a very difficult one; through thick forests, over rude and steep mountains, and across a great river, on which is a wooden bridge, guarded, night and day, by a god called Tatutiso. This divinity is supposed to be employed in purifying the souls from all the impurities they had contracted while alive. At length the soul is represented to arrive in paradise, but the paradise of the Manacicas is not a very enviable one; its pleasures are not peculiarly attractive. There is nothing to be found in it, as these people imagine, but a kind of gum, with honey and fish, on which the souls are fed. The mapono, at his return, relates a thousand other absurdities, concerning his journey, and never fails to get well paid for his trouble.

Twenty-second Day's Instruction.

BRASIL.

THE name of *Brasil*, which was originally understood to apply to a small portion of the American coast, from the mouth of the Amazon southward, now comprehends all the Portuguese territories in South America. This vast region extends from the equator to the thirty-third degree of south latitude. It is bounded on the north by Portuguese Guiana and the Amazon; on the south by the Spanish settlement of Buenos Ayres; on the west by the Spanish back settlements of Peru and Paraguay; and on the east by the Atlantic ocean. Its whole length is not less than two thousand three hundred miles, and its greatest breadth about fifteen hundred.

When viewed from the sea, Brasil, at the first aspect, appears mountainous, rough, and unequal; but, on a nearer approach, its scenery is extremely picturesque and beautiful: its eminences are covered with magnificent woods, and its valleys with perpetual verdure. A considerable portion of its interior forms one vast forest. But in the centre there is a plain called *Campos Parexis*, which extends, from east to west, several hundred miles; and is covered with a light earth, and with a surface of sand so light, that by its continual shifting and undulation, it resembles, at a distance, the agitated waves of the ocean. This immense desert rises towards the centre into chains of mountains, which are generally considered the highest in Brasil, and which are extended over a space of more than two hundred leagues. From this mountainous country numerous *rivers* proceed, some of which fall into the Atlantic Ocean, and others into the river Amazon.

Many parts of Brasil are endowed with the most exuberant fertility, and are capable of yielding every

production by which the finest climates of the world are adorned and enriched. Its forests produce innumerable kinds of timber, both for ornament and use; and, from beneath the surface of the ground, are obtained gold and precious stones, in great abundance and variety.

This country was originally discovered in the year 1500, by a Portuguese navigator, whose name was Cabral. He sailed along the coast for a considerable distance, and afterwards arrived at a harbour, on the shore of which he landed. The country he called *Santa Cruz*, (the Holy Cross) and the harbour where he landed, he named *Porto Seguro;* and, according to that ill authorized right which Europeans have often assumed to themselves, he took possession of the whole adjacent districts in the name of the king his master. Some time after this the Portuguese formed settlements and established colonies on the coasts.

Few countries are more healthy than Brasil. In consequence of the refreshing winds which blow from the sea, the atmosphere of many parts of it is not only temperate, but, during the night, is so cold, that the natives are obliged to light fires in their huts. The northern provinces are subject to severe storms and heavy rains, but those towards the south are much more temperate. In Brasil the winter or rainy season begins in April and ends in August.

The chief *commercial productions* of this country are tobacco, wood, sugar, salt, and hides. In some parts grapes of excellent quality are reared; and from these there is reason to believe that wine might be very abundantly produced. It is asserted, that more than two centuries ago, tea, of similar quality to that of China, was found wild in the vicinity of *Bahia.* If this assertion be correct, the culture of a plant, for which the demand in Europe is at this time extremely great, would open a copious source of wealth to the Brasillians. No situation can be better adapted to the *whale fishery,* than the coast of Brasil; for the

adjacent seas every where abound in these animals. Some of them are killed by men who go out from the shore in large boats; but there is no provision either for taking of whales or extracting the oil; if there were, this might be rendered an important article of commerce. Vessels are frequently fitted out from England for the purpose of fishing for whales in this part of the ocean.

Brasil is subject to the court of Portugal; and, towards the end of the year 1807, when the French armies had overrun a considerable part of the European territories belonging to that court, the regent of Portugal resolved to emigrate with his family, his chief ministers and all his most valuable effects, to his American possessions. He sailed from Lisbon, under the convoy of a British fleet, and, after a prosperous voyage, arrived at Bahia, in Brasil, on the 25th of January following. He spent a month there, visited the most remarkable places in its vicinity; and then sailed to Rio Janeiro, where he subsequently established his residence, and where he has since continued.

Rio de Janeiro.

Brasil is divided into eight chief provinces, or governments. The southernmost, and one of the richest of these, is *Rio de Janeiro,* so called from a river of that name which falls into the Atlantic Ocean, about the twenty-second degree of south latitude. This province extends from Buenos Ayres on the south, about nine hundred miles along the coast, as far as *Bahia,* or St. Salvador. On the east and south it is bounded by the sea; and on the west by an extensive chain of mountains. The climate is, in general, healthy and agreeable, free from many inconveniences that are incident to other tropical countries. The banks of the rivers are delightful; and the soil, in several parts, is extremely fertile. This country contains rich mines of

gold, to which no persons can have access except those who are concerned in the working of them.

Within the district of Rio de Janeiro is the island of *St. Catherine*, situated in about twenty-seven degrees thirty-five minutes of south latitude. In a late commercial treaty with Great Britain, the port of St. Catherine has been declared free for the admission of mercantile productions of every description, on payment of a certain duty to the government of Brasil. But previously to this arrangement no foreign merchant vessels, except those belonging to the Portuguese, were admitted into any of the ports of Brasil.

The navigator, on approaching this island, is delighted with the grand and picturesque aspect of its conical rocks, rising abruptly from the sea, and embellished with the lofty mountains of Brasil, covered with wood, in the background. The principal harbour of the island is entered through a narrow passage; and, from the anchorage, but, more particularly, from the landing place, which is at the bottom of a verdant slope planted with orange-trees, and about five hundred yards in length, the town has a beautiful appearance, and the perspective is nobly crowned by a fine cathedral at the summit. On entering the town, the navigator immediately discerns in its general appearance, and in the manners of its inhabitants, a great superiority over those of Monte Video and Buenos Ayres. The houses are well built, are two or three stories high, and have boarded floors, and neat gardens, well stocked with vegetables and flowers. There are several streets, and the town contains from five to six thousand inhabitants. It is found an agreeable place for merchants who have retired from business, and for other persons, who have secured an independence, and are desirous only of leisure to enjoy it.

The produce of St. Catherine's consists chiefly of rice, maize, cassava or manioc, coffee of excellent quality, flax, sugar, and indigo, and various kinds of fruit, particularly oranges, the finest perhaps in the world.

A profusion of flowers indicate the genial nature of its climate: the rose and the jasmine here bloom throughout the year. The surface of the island is varied with mountains, plains, and, in a few places, with swamps. In some parts there is an excellent kind of red clay, which is manufactured into jars, culinary vessels, and other useful articles, of which great numbers are exported to the Plata and to Rio de Janeiro. The sea around the island produces such an abundant supply of fish, that as many may be purchased for a shilling as will serve a dozen persons for dinner. The meat is hard and lean, but so cheap as seldom to exceed three halfpence a pound. Pigs, turkeys, ducks, poultry, and eggs, as well as vegetables and potatoes, are plentiful and cheap. The wild animals that are found in the island are chiefly opossums, monkeys, and armadillos. Of birds there are cranes, hawks, parrots of numerous species, humming birds, and toucans. Many kinds of serpents are also found here.

Landed property in St. Catherine's is of very low value. When Mr. Mawe was in this island, he says that, at the distance of about two miles from the town, a neat house, a small orangery, and ground sufficient to form a pretty plantation, were offered for sale at a hundred dollars. An excellent house, in one of the best situations in the environs of the town, with a garden of about two acres well and tastefully planted, was offered to sale for four hundred pounds sterling.

This island is divided into four parishes, and is under the superintendance of a governor, who, in certain cases, is subject to the captaincy of St. Paul's, and in others to the government of Rio de Janeiro. Its climate is serene and healthy. The heat is constantly moderated by breezes from the south-west and north-east, the former of which blow from April to August, and the latter from September to March.

Betwixt the island of St. Catherine and the harbour of Santos, the coast of South America is low and flat, covered, in several parts, with lofty trees, which also

fringe the mountain scenery beyond it. There are many rivers, some of which are highly advantageous to the inhabitants, as they pass the very doors of their dwellings, and afford easy means for the transport of produce from the interior. On approaching Santos there are several prominent rocks; and the mountains beyond them are very high.

Account of Santos, St. Paul's, and the adjacent Country. From Mr. MAWES' *Travels in Brasil.*

The harbour of *Santos* has a safe entrance; and there extends from it a lagoon or river three or four leagues in length, at the extremity of which is the town, one of the oldest European settlements in Brasil. Santos is a place of considerable trade. It is the storehouse of the captaincy or district of St. Paul's, and the resort of many vessels which trade to the river Plata. It is a tolerably well built place, and contains six or seven thousand inhabitants, most of whom are merchants, shopkeepers, or artisans; but it is considered unhealthy, as the adjacent country is low, woody, and frequently deluged with rain. Several rivulets which flow from the foot of the high mountains in the vicinity, intersect the land in various directions, and unite in one great river a little above the town.

This is the embarking place of St. Paul's, consequently the intercourse between Santos and that town is very considerable, and from Santos a great quantity of sugar, coffee, rum, rice, and indigo, are annually shipped. In the course of the day it frequently happens that several hundred mules arrive at Santos, laden with the produce of the country. These return with salt, iron, copper, earthenware, and European manufactures. The river is navigable to the distance of about twenty miles up the country, as far as a place called Cuberton, where an officer with a guard of soldiers is stationed, to receive the duties for the repair of the roads, and other public purposes.

Mr. Mawe, and some gentlemen who accompanied him, were desirous of visiting *St. Paul's*. This is a town in the interior, and about forty-four miles distant from Santos. Having obtained from the governor the requisite permission, they proceeded up the river to *Cuberton*, where they procured saddle horses for the remainder of the journey. About half a mile beyond this village, they arrived at the foot of a stupendous range of mountains, which they had to cross. The road was well paved and good, but it was narrow, and, on account of the rugged acclivities, had been cut in a zigzag direction. The trains of loaded mules which they met on the way, and which were proceeding to Santos, rendered the passage not only disagreeable, but dangerous. The highest point over which Mr. Mawe and his companions passed, was a plain of considerable extent, about six thousand feet above the level of the ocean. From this plain the sea, though twenty miles distant, seemed as if it washed the foot of the mountains. Towards the interior of the country the road was bordered on each side by fine trees and large thickets. After this the travellers passed a tolerably good inn, which was kept by an officer of militia, and where they were amply provided with milk, coffee, and fowls. As they approached St. Paul's the road was enlivened by a greater number of habitations than they had before seen. They passed two convents, which had the appearance of dwelling houses, and which were only distinguishable from such, by having large crosses before them.

St. Paul's, though built in an elevated situation, is not observable at a great distance. Near it the travellers saw an astallage or inn. It consisted of a large shed, supported upon upright pieces of timber, and divided into numerous compartments for the reception of the cargoes or burthens of mules. Each trader was permitted to occupy as many of these as his goods required; and there was a piece of ground, about one hundred yards in circumference, planted with small

upright stakes, ten or fifteen feet distant, for the bridles of the mules to be tied to while the animals were fed, saddled, and loaded. These astallages are common in all parts of Brasil.

On entering the town the travellers were surprised by the neat appearance of the houses, stuccoed in various colours, those in the principal streets being two or three stories high. This place contains several squares, and about thirteen places of religious worship, two convents, three monasteries, and eight churches. The greater number of these, as well as of the houses, are built of earth, rammed firmly down between frames of wood, which are removed as the walls are constructed. The roofs are covered with tiles, and none of the houses have chimneys. In the stones that have been used for paving the streets, there are small particles of gold; and these, after heavy rains, are diligently sought for by the poor people, in the chinks and hollows.

St. Paul's is a healthy city, and is by no means so hot as many places in the same latitude. The rains are not heavy nor of long continuance, nor are thunder storms here very violent. The inhabitants are betwixt fifteen and twenty thousand in number; and the clergy, including all ranks of religious orders, may be reckoned at about five hundred.

At St. Paul's the dress of the ladies, when they go abroad, usually consists of a garment of black silk or cassimere, a long veil of the same material, trimmed with broad lace. At table they are extremely abstemious. Their favourite amusement is dancing, in which they display much vivacity and grace. At balls and other public entertainments they generally appear in elegant white dresses, with a profusion of gold chains about their necks, and with their hair tastefully disposed and fastened with combs. Their whole education appears to be confined to superficial accomplishments. They seldom trouble themselves concerning domestic affairs, but leave every thing relative to the management of their houses to the negroes and servants.

An almost universal debility prevails among them: this is attributable partly to their abstemious living, but chiefly to want of exercise, and to the frequent warm bathings, in which they indulge.

The men of higher rank dress very superbly. In company they are polite and attentive, and show every disposition to oblige. Those of lower rank, when compared with the people of other colonial towns, are in a very advanced state of civilization. The religious processions in St. Paul's are splendid, grand, and solemn. On particular occasions of this kind nearly all the inhabitants of the city attend, and the throng is frequently increased by the neighbouring peasantry for several leagues around.

Mr. Mawe and his friends found little difficulty in accommodating themselves to the mode of living at this place. Coffee, and bread and butter were sometimes used for breakfast, but a more common breakfast consisted of a kind of beans, called feijones, boiled or mixed with manioc. Dinner, which was usually served about noon, consisted of greens boiled with pork or beef, roots of the potatoe kind, stewed fowls, and salad. The dessert consisted of a great variety of conserves and sweetmeats. The usual beverage was water; but, on public occasions, wine circulated freely.

Flowers are here considered an indispensable ornament of the female head-dress, and, when a stranger is introduced to a lady, it is considered a common act of courtesy for her to take a flower from her hair and present it to him. This compliment he is expected to return in the course of the visit, by selecting a flower from the profuse variety which adorn the garden or balcony, and presenting it to her. On certain occasions, particularly on the two first days of Lent, it is a singular custom, in this place, for persons of different sex to throw at each other artificial fruit, such as oranges or lemons, neatly formed of wax, and filled with perfumed water. A lady generally begins this extraordinary contest, and the gentleman returns the attack with so much spirit, that it seldom ceases till both parties are as wet as

if they had been drawn through a river. On these days of carnival, if they may be so termed, the inhabitants parade the streets in masks, and the diversion of throwing artificial fruit is adopted by persons of all ages. This practice is very annoying to strangers, and is not unfrequently the cause of serious quarrels.

Very few articles are manufactured at St. Paul's; a little cotton is spun by the hand, and woven into cloth for wearing apparel, sheets, &c. The inhabitants make a beautiful kind of net-work for hammocks. This is fringed with lace, and forms an elegant article of furniture. The making of lace is here a general employment for females. Most of the inhabitants are either farmers or husbandmen, who cultivate small portions of land, on which they breed pigs and poultry for sale. With these the market of St. Paul's is generally so well supplied, that fowls may be purchased for threepence or fourpence each; small pigs for two shillings, and flitches of bacon for about twopence a pound. Cattle are sold from twenty-four to thirty shillings sterling each; and the price of beef is from a penny to three halfpence a pound. In the vicinity of St. Paul's there is a fine and large breed of goats, the milk of which is used for domestic purposes. During the fruit season the markets are well supplied with pines, grapes, peaches, guavas, bananas, and quinces; and vegetables of numerous kinds are very abundant, particularly cabbages, turnips, cauliflowers, artichokes, and salad-herbs.

About a century ago the land around St. Paul's abounded with gold, but the inhabitants gradually exhausted it, by washing the soil, and they now chiefly employ themselves in husbandry. They grow maize or Indian corn, cassava or manioc, and a kind of bulbous root, called cara. The last is about five inches in diameter, and equal in excellence to the best potatoes. The richest farmers cultivate sugar-canes, and manufacture a considerable quantity of sugar. The farm-houses are hovels, in general one story high, and wholly destitute both of comfort and cleanliness.

Many of the gardens at St. Paul's and in its vicinity are laid out with great taste, and some of them with much elegance. Jasmine is everywhere abundant; and rose trees, carnations, pinks, passion flowers, &c. are found in every garden. From the seeds of the palma christi, or castor oil plant, the inhabitants procure such an abundance of oil, that they burn no other kind in their lamps.

The woods furnish large and durable timber, well calculated for building, among which the jaraconda, or rose-wood tree, is very common. They also abound in a great variety of animals of the monkey kind, and deer, vampire bats, porcupines, opossums, and beasts of prey. Reptiles and serpents are very numerous. In the evenings a great number of toads crawl upon the foot-paths, and infest even the streets of the city.

The governor of St. Paul's invited Mr. Mawe to visit the gold mines of *Jaragua*, distant about twenty-four miles. These, which were the first that had been discovered in Brasil, and had been famous for the immense treasures obtained from them, were at this time the property of the governor. The party proceeded along a fine road, which in some places accompanied the banks of a river. The country in which the mines were situated was somewhat mountainous; and the rocks appeared chiefly to be of granite. The soil was red, and in many places of great depth. The gold lay, for the most part, in a stratum of rounded pebbles and gravel, called *cascalhao*, immediately incumbent on the solid rock. In the valleys, where there was water, numerous excavations occurred. These had been made by the gold washers; and some of them were from fifty to a hundred feet wide, and eighteen or twenty feet deep. On many of the hills, particles of gold were found in the soil, little deeper than the roots of the grass.

The mode of obtaining the gold is thus described: Where water of sufficiently high level can be commanded, the ground is cut into steps, each twenty or

thirty feet wide, two or three feet broad, and about one foot deep, and, near the bottom, a trench two or three feet deep is formed. On each step stand six or eight negroes, who, as the water flows from above, keep the earth continually in motion with shovels, until the whole is reduced to a liquid mud which is washed below. The particles of gold contained in this mud descend into the trench, where, in consequence of its weight, it remains. Workmen are continually employed at the trench to remove the stones, and clear away the surface; and this operation is much assisted by the current of water which falls into it. At the end of every five days the contents of the trench are taken out, and carried to some convenient stream to undergo a second washing. For this purpose wooden bowls, of a funnel shape, about two feet wide at the mouth, and five or six inches deep, are used. Each workman, standing in the stream, takes into his bowl five or six pounds of sediment. He admits into it a certain quantity of water, and moves it about so dexterously, that the gold, separating from the other substances, settles to the bottom and sides of the vessel. The workman rinses his bowl into a larger vessel, of clean water, leaving the metal in it, and then begins again. Some of the particles of gold are so minute as to float on the water, while others are as large as peas, and some even much larger. As the result is of considerable importance, this operation is superintended by overseers. When the whole is finished, the gold is carried home to be dried, and afterwards is taken to an office called the Permutation Office, where it is weighed, and one-fifth of it is reserved for the prince. The remainder goes through the requisite operations of smelting, purifying, and being cast into bars or ingots, and stamped according to its value. These ingots are afterwards circulated as specie.

After Mr. Mawe had remained here five days, he and his friends returned to St. Paul's, and subsequently to Santos, whence they sailed for Rio Janeiro.

Twenty-third Day's Instruction.

BRASIL CONTINUED.

Account of Rio de Janeiro and the adjacent Country. From Mr. MAWE'S *Travels in Brasil.*

MR. MAWE arrived at *Rio de Janeiro* immediately after the court and chief nobility of Portugal had reached it. The English shipping, which had escorted them, was lying in the harbour. This was a circumstance peculiarly favourable to him, for it afforded him the means of being introduced to many of the principal persons, both of the court and the country.

The approach from the water to the city of *St. Sebastian*, or *Rio*, as it is usually called, is peculiarly fine. The lofty eminences of this place, crowned with convents, and the hills in its environs, interspersed with villas and gardens, have a rich and magnificent appearance. The royal palace skirts the beach, and is seen to great advantage from the principal landing place. Though small, this palace was now the residence of the Prince Regent and the royal family. Parallel with the beach runs the main street, which consists of noble buildings; and from this the smaller streets branch off at right angles, and are intersected by others at regular distances.

Some idea of the extent of Rio may be formed from the population, which, including negroes (its most numerous portion) is estimated at one hundred thousand individuals. The *streets* were formerly incommoded by latticed balconies, which obstructed the circulation of the air, but these had all been taken away, by order of the government, before the arrival of Mr. Mawe. The greatest nuisances now remaining were those which arose from the custom of persons of every rank

riding on the foot paths, and from the inconvenient hanging of the shop and house doors, which all opened outward into the street. In wet weather also numerous puddles were formed in the streets, which, in consequence of the heat, emitted the most putrid exhalations. Water for the use of the city flows from the hills through aqueducts, and is distributed to fountains in several public places. Many of the inhabitants, however, live at a great distance from these, and consequently are obliged to employ persons to bring the water to them: consequently great numbers of poor people earn their subsistence by carrying and selling water.

The *houses* of Rio are seldom more than one story high; notwithstanding which the rents are nearly as great as they are in London. This is chiefly owing to the dearness of all kinds of building materials, and to the high price of masonry. Timber, in particular, is extremely scarce. The inns and public houses of this place were at this time almost destitute of accommodations, and were also excessively uncomfortable. The convents and churches were in general well built; and the cathedral, which had just been finished, was in a superior style of architecture.

Owing to the lowness of its situation, and the general filthiness of the streets, Rio de Janeiro could not be considered a healthful place; but improvements were making, which, it was imagined, would remedy many of these evils. The police was by no means ill regulated; and from the attention that had been paid to it since the arrival of the court, there appeared a reasonable hope that it would soon be placed on a footing equally respectable with that of any European capital.

Rio de Janeiro is the chief mart of Brasil; and few ports are so well situated for commerce as this. It enjoys beyond any other a convenience of intercourse with Europe, America, Africa, the East Indies, and the South Sea islands. As the capital of a rich and extensive territory, it also commands resources of

immense amount and value. The imports from the Rio Plata, and other parts of South America, consist of immense quantities of dried beef, of tallow, hides, and grain. Those from the United States are chiefly salt provisions, flour, household furniture, pitch, and tar. From the western coast of Africa, Rio de Janeiro imports wax, oil, sulphur, and some kinds of wood. From Mosambique, and other parts of Africa, it obtains ivory, ebony, drugs, oil, and various kinds of gum. The imports from Portugal, the mother country, consist chiefly of wine and oil. The whale fisheries on the coast have proved a source of wealth to many speculators. The exports consist of cotton, sugar, rum, ship-timber, various kinds of wood for cabinet work, hides, tallow, indigo, and coarse cotton cloths, and other articles. Among the more precious articles of export may be enumerated gold, diamonds, topazes of various colour, amethysts, tourmalines, chrysoberyls, aqua-marines, and wrought jewelry.

Provisions at Rio de Janeiro are plentiful, but not of excellent quality. Pork is tolerable; but the beef is bad, and mutton is almost unknown. Poultry of every description are excellent, but dear. Vegetables are very abundant, and the fish market is not ill supplied. Turtles are frequently caught.

During his residence at this place, Mr. Mawe was induced to visit the royal farm at *Santa Cruz*, distant about fifty miles from the capital. The house had once been a convent of Jesuits, and the apartments were thirty-six in number, but, in general, very small. Of late, however, it had been somewhat decorated and improved for the purpose of its being used as a summer residence for the royal families. In front of the house, towards the south, extends one of the finest plains that can be imagined, watered by two rivers, navigable for small craft, and bounded by a fine bold and rocky scenery, embellished in many parts with noble forest trees. This plain is clad with the richest pasture imaginable, and supports seven or eight thousand head

of cattle. The park of Santa Cruz occupies, in its entire extent, upwards of one hundred square miles, a territory almost as large as some of the late small principalities of Italy, and capable of being rendered one of the most productive and populous districts of Brasil.

Some time after Mr. Mawe's return from Santa Cruz, a circumstance of a singular nature occurred, which occasioned him to undertake a journey to a district called *Canta Gallo*, distant about a hundred and twenty miles from the capital. Two men reported at Rio de Janeiro, that they had found a mine of silver, and they brought to the royal mint a quantity of earthy matter, reduced to powder, from which was smelted a small ingot of that metal. This report being laid before the prime minister, Mr. Mawe, who had a considerable knowledge of mineralogy, was solicited to go to Canta Gallo, for the purpose of investigating the business on the spot, the two men being ordered to meet him there.

Accordingly he and some other persons proceeded in a small vessel along the bottom of the harbour, and thence up one of the rivers that empty themselves into it. They passed through a part of Brasil, very various in its appearance. In some places it was swampy, in others it presented extremely beautiful and picturesque views, and in others there were farms and sugar plantations; but most of these were in an extremely neglected and dilapidated state. There was a general sickliness in the looks of the inhabitants, which could be imputed only to their miserable diet and inactive life. On the third day the travellers reached the mountains, and entered on an extremely steep and uneven road. They rode on mules, but were now obliged to dismount for the purpose of walking up almost perpendicular passes, and along fearful declivities. The rocks appeared to be chiefly of granite. Mr. Mawe was informed that some of the farms and plantations in the mountains were much infested by ferocious animals.

At length the party arrived at Canta Gallo, the place of their destination; and their reception was highly gratifying. The governor and principal inhabitants of the place, overjoyed to see Englishmen in these remote parts, treated them with the utmost cordiality and friendship.

Canta Gallo, a place unknown till about twenty years before Mr. Mawe was in Brasil, is situated in a fine and well-wooded country, which abounds in springs, and is intersected by narrow valleys and ravines. Many of these formerly contained gold, but so little was now left that, although the prince claimed one-fifth part of the produce, from such individuals as chose to collect it, the sum thus obtained, was scarcely sufficient to pay the officers and soldiers who were appointed to receive it.

The land around this place is strong and good. Its various inequalities present spots adapted to the growth of almost every description of vegetable produce. In the valleys and on the sides of the mountains, the soil, in some parts, consists of strong clay, but more generally of a rich vegetable mould. The rock, on which this lies, is granite. No metallic substances are found here except gold, and some kinds of iron ore. The former occurs in the interjacent bed of cascalhão, and exists only in grains.

The half civilized *Indian inhabitants* of this neighbourhood reside in the woods. Their dwellings are formed of boughs of trees, bent so as to hold a thatch or tiling of palm-leaves. Their beds are made of dry grass. Having little idea of planting or tillage, they chiefly depend for subsistence on their bows and arrows, and on roots and wild fruits, which they find in the woods. About fifty of these Indians paid Mr. Mawe a visit. The dress of the men consisted of a waistcoat and drawers; and that of the women was only a chemise and petticoat, with a handkerchief tied round their head, after the manner of Portuguese females. They had the general characteristics of their

original race, a short and round visage, broad nose, and lank black hair; and, in stature, they were somewhat short and stout. Mr. Mawe, being desirous of seeing a proof of their skill in archery, placed an orange at the distance of thirty yards; and it was pierced by an arrow from every one who drew his bow at it. He then went into a wood to see them shoot at birds. There were very few to be seen, but they discovered these much more quickly than he could have done; and, cautiously creeping along till they were within bow-shot, they never failed to bring down their game. The silence and expedition with which they penetrated the thickets, and passed through the brushwood, were truly surprising. These Indians were loathsome in appearance, and they devoured nearly all kinds of animal substances in the most disgusting manner: for instance, a bird unplucked, and half-roasted, with the entrails remaining in it. They were not of a shy or morose character, but had a great aversion to labour, and would not submit to any regular employment. Rarely were these Indians to be found serving as domestics or working for hire.

About fifteen miles north-west from Canta Gallo, Mr. Mawe and his friends visited a place called *Santa Rita*, where a considerable quantity of gold was obtained by washing the soil. The proprietor of the works received the strangers with great kindness, and conducted them through every part. The operations were carried on in a deep ravine, bounded at one end by an abrupt hill, and open at the other to an extensive plain. The soil appeared to be extremely fertile: it was clothed with luxuriant verdure, and the hills on each side were covered with trees of almost all dimensions. The stratum of cascalhão, in which the gold was found, lay under a bed of soil four or five feet deep: in some parts this cascalhão was two feet thick, and in others not more than seven or eight inches. It is dug out with great labour and expense,

and is conveyed to a convenient place where there is water; and where it is washed by negroes, in bowls, and in a way similar to that already described.

Near Santa Rita Mr. Mawe discovered a considerable quantity of lime stone. He presented some of it to the proprietor of the gold work. This gentleman was excessively astonished to be informed of such a production. He had never before heard of lime-*stone*, for the lime that was used in this part of the country was made from sea-shells; nor could he be convinced of the fact till Mr. Mawe had proved it to him by burning what he produced.

On their return to Canta Gallo, Mr. Mawe and his associates were conducted by a guide to the pretended silver mine. This was several miles distant, and the road to it lay over a rugged and almost impracticable country. For the last six miles they were obliged to dismount and to walk over mountains which were impassable by mules. They forded rivulets and proceeded through thickets, which scarcely left them a single article of dress untorn; and, at length, they discovered that they had been imposed on, and that no such mine existed. The silver that had been exhibited at Rio de Janeiro, was supposed to have been an old buckle or spoon filed down, and mixed with some kind of earthy substance. Mr. Mawe says, that impositions of this description are not uncommon, and that they are practised for the purpose of enhancing the value of land, or of obtaining reward for pointing out places whence it is believed great wealth may be obtained.

In this country a passion for mining is fatally prevalent among some of the lower orders of the people. By deluding them with prospects of speedily becoming rich, it creates in them a disgust for labour, and often entails upon them want and wretchedness. Even among the few families who inhabited this little district, Mr. Mawe observed some examples of its fatal effects: those persons who had devoted themselves wholly to

mining, were, in general, badly clothed and worse fed, while those who attended to agriculture alone, were well provided with every necessary of life.

During his excursion to Canta Gallo, Mr. Mawe was shown many valuable kinds of timber trees, some of which were of great size, and well calculated for ship-building, and others might be rendered useful in cabinet work. This country also abounds in fruit-trees of various kinds. In some places tobacco is cultivated, and in others, sugar-canes, coffee, and cassava. There are many kinds of wild animals, particularly ounces and jaguars; and tapirs, ant-eaters, and a species of long-bearded monkeys are not uncommon. The latter, when asleep, snore so loudly as, in many instances, to astonish such travellers as pass near the places inhabited by them. Serpents of different kinds are found here, but Mr. Mawe did not see any.

After his return to the capital, Mr. Mawe solicited permission to visit the diamond mines of Serra do Frio. This was a favour which had never, hitherto, been granted to any foreigner; but, through the mediation of a Portuguese nobleman, aided by the influence of Lord Strangford, the British ambassador, his application was successful, and he was allowed to select two soldiers, from the corps of miners, to attend him. Mr. Mawe remarks, that the most eligible mode of travelling in Brasil, is to obtain an order from the government, and an escort of soldiers; as the latter, under such an order, have a right to require the use of mules from all such persons as reside near the road.

While Mr. Mawe was preparing for his journey, an occurrence took place, which obtained for him considerable celebrity. A free negro, who resided at a town about nine hundred miles distant, addressed a letter personally to the prince, announcing that he possessed an amazingly large diamond; this, he said, he had, some years before, received from a deceased friend; and he requested that he might have the honour to present it to his royal highness in person. The

magnitude which this poor fellow had ascribed to his diamond was such as to raise the imagination to its highest pitch; and an order was immediately despatched that he should be accommodated with a conveyance to Rio, and be escorted by two soldiers. As he passed along the road, his prospect of promotion and wealth excited the envy of all who saw him. At length, after a journey of twenty-eight days, he reached the capital, and was immediately conveyed to the palace. He was admitted into the presence chamber, where, throwing himself at the feet of the prince, he delivered his wonderful gem. The prince was astonished at its magnitude: a pause ensued: the attendants waited to hear his opinion. A round diamond, nearly a pound in weight, filled them all with wonder. This occurrence excited much conversation among the higher circles; and it was the general topic of remark and astonishment. The stone was shown to the ministers, among whom an apprehension, and even a doubt was expressed, that a substance so large might not prove to be a real diamond. They, however, sent it, under a strong guard, to the treasury, and it was lodged in the jewel-room.

On the ensuing day Mr. Mawe was sent for, and was requested to give his opinion respecting this imaginary diamond. He was conducted to the grand chamber, where the treasurer and his secretaries were assembled. He was thence led through several splendid apartments, hung with scarlet and gold, to an inner room, where were several strong chests with three locks each, the keys of which were kept by three different officers. One of these chests being unlocked, an elegant little cabinet was taken out. From this the treasurer took the gem, and, in great form, presented it to Mr. Mawe. Before this gentleman touched it, he was convinced that it was only a rounded piece of crystal. It was about an inch and a half in diameter; and, by cutting a deep nick in it with a diamond, he immediately convinced all the persons in attendance

that it was not a diamond, but an inferior substance, of little value.

After the examination of this imaginary diamond was over, other boxes were unlocked, from one of which Mr. Mawe was shown two slabs of diamond, each a full inch in length, and about the eighth of an inch in thickness, but of a very bad brown colour. This stone, when whole, not being known to be a diamond, the chief of the working party that had found it, had had recourse to a very common experiment, of placing it on a stone and striking it with a hammer. The result of this mode of trial is, that if the substance either resist the blow or split into leaves, it must be a diamond. The latter was the case in the present instance; and the stone was thus excessively reduced in value.

Mr. Mawe was then shown the remaining diamonds in the treasury. They were very numerous, but few of them were of large size. Among the few coloured diamonds that were kept here, one was of a beautiful pink, one a fine blue, and several of a green tinge: the yellow were the most common and the least esteemed.

With respect to the stone which Mr. Mawe had been conducted to the treasury to examine, the poor negro, who had presented it, was of course deeply afflicted by the unwelcome discovery that it was of no value. Instead of being accompanied home by an escort of soldiers, he had to find his way thither as well as he could, and had no doubt to encounter the ridicule of many of those who had lately congratulated him on his good fortune.

In his journey to Villa Rica, near which the diamond mines are situated, Mr. Mawe was accompanied by a respectable merchant, whose name was Goodall, by two soldiers, a servant, and a negro boy. The party embarked, on the 17th of August, 1809, and proceeded in a large market-boat, to the bottom of the Bay, a distance of about six leagues. After this they entered the river *Moremim*, which presented in its serpentine

course, a great variety of beautiful scenery. When they had advanced about two leagues up the river, they reached a place, on the bank, whither great numbers of mules every day arrived from the country, laden with the produce of the interior, for the purpose of its being embarked for the capital. Here the travellers passed the night, in an extremely dirty and uncomfortable inn; and from this place they proceeded, on mules, over a beautiful plain, about nine miles in extent, to the foot of the mountains. These they crossed, and, in the valleys, observed several farm-houses and plantations. Beyond the mountains, the road was bounded, on each side, by extensive forests.

One evening, as the travellers were amusing themselves in the woods with shooting, they observed a man, in a friar's habit, with a box, containing a picture of the Virgin, fastened to his belt. His face was overgrown with hair, and his whole appearance was wild and uncouth. On inquiry they were informed that he was a hermit, and that he had embraced this austere kind of life by way of doing penance for some great crime.

At the distance of about one hundred and fifty miles from Rio de Janeiro, the travellers arrived at a village, consisting of about two hundred dwelling-houses, and seated on a commanding eminence, in an extremely fertile country. This was a place much frequented by people from various parts of the interior, and had a considerable traffic in various articles, particularly in baizes, cotton goods, salt, and iron; and many of the shops were well stocked with English manufactures. In its vicinity there was a quarry of soft whitish granite, from which mill-stones were made.

After a fatiguing journey of several days, over a varied country of mountains, valleys, and plains, intersected in many places by rivers, they at length approached the vicinity of Villa Rica, the place of their destination.

At some distance from this town, they had ridden down a hill that was covered with rich iron ore in such

profusion that tons of it might have been gathered from the surface. A little beyond this they had arrived at a house, the owner of which, as they were informed, possessed a topaz mine in the neighbourhood. The mention of a *mine of topazes* excited the curiosity of Mr. Mawe, as it gave him the idea of a vein worked underground. On expressing to the owner his desire to see the works, the latter kindly undertook to accompany him to the spot. After having walked about half a mile up the side of the mountain just mentioned, two breaks or slips in the rock were pointed out to him as the mines for which he had inquired. He entered one of them, the sides of which were chiefly of slate, and observed two negroes, each of whom was employed in poking into little soft veins with a piece of rusty iron. On inquiring what these men were about, he was informed that they were the *miners*, searching for topazes. Mr. Mawe took one of their instruments, and, on using it as they did, he found the veins to contain a very minute micaceous substance, some quartz, and many large crystals of iron ore. He had also the good fortune to find two or three topazes. The topazes which Mr. Mawe was shown here, were very imperfect and full of flaws. The negroes employed in these works were superintended by two creoles, who received what the negroes found. In the owner's house Mr. Mawe was afterwards shown a great quantity, at least a cart-load of inferior topazes, any number of which he might have been permitted to take away. He selected several specimens; and, then pursuing his journey, arrived about three o'clock of the same day at *Villa Rica*.

This town stands on an eminence, somewhat steep and lofty. Its environs exhibited few signs of cultivation. Not an acre of good pasture ground, nor an enclosure of any kind was to be seen. The travellers were conducted to one of the best inns in the place. The owner was a priest, who entrusted the management of his house to a mulatto; and it was not remarkable either for cleanliness or for excellence of accommodations.

Villa Rica, or, "the rich village," the capital of a province and the seat of its government, was, for many years, reputed to be the wealthiest place in Brasil, as to it was brought all the gold that was collected in the vast surrounding district. Mr. Mawe and his friend were consequently desirous of seeing some vestiges of that splendour which the name imports. After having been introduced to a few of the principal persons there, they devoted some hours to a perambulation of the town. The streets were irregular, badly paved, and so steep that many of them ranged, in a kind of steps, from the base towards the summit of a mountain. There were fountains in every part, and an abundance of water was conducted into almost every house. Villa Rica is divided into two parishes, and at this time contained about twenty thousand inhabitants, of whom more were whites than blacks. The population, however, was by no means so great as it had formerly been, when the mines in the adjacent country were rich. Few of the inhabitants, except shopkeepers, seemed to have any employment. Persons in the higher classes, particularly the ladies, dressed much in the English style. The houses of the principal people were convenient, well furnished, and very neat. Mr. Mawe says that the beds were peculiarly elegant. The posts of some that he saw were formed of fine wood, fluted or carved in various ways: the sides were plain, and the bottoms were formed of boards or leather. The beds themselves were of cotton; and the sheets of fine linen, edged with lace at least nine inches broad. The bolsters were covered with muslin, the ends of which were also edged with lace. The pillows were made round at the ends, and were covered with pink sarsenet, over which was a cover of fine muslin, terminated with broad lace. The coverlets were of satin with lace round them. The hangings were of similar materials, and in the form of a canopy.

The gardens around Villa Rica were laid out with great taste, and, from the peculiarity of their formation, presented a singular spectacle. As there was scarcely

a level piece of ground, ten yards square, on the whole side of the mountain, this defect had, in some degree, been remedied, by cutting spaces, one above another, at nearly equal distances; and supporting them by low walls, the top of one being on a level with the bottom of that next above it. An easy flight of steps led from one level to another. These terraces, says Mr. Mawe, seemed to be the very kingdom of Flora, for he never before had seen so great a profusion of flowers. Here also were excellent vegetables of almost every kind, artichokes, asparagus, spinach, cabbages, kidney beans, and potatoes, and many kinds of fruit. Some of the peach trees were so heavily laden that their branches required perpendicular support.

Notwithstanding the fertility of the land around Villa Rica, the market was but ill supplied with provisions. Vegetables for the table were scarce, and even grass was an article in great demand. Poultry were sold at about four shillings per couple; but tolerably good beef might have been had for three halfpence per pound. The pork was fine; but mutton was wholly unknown.

The climate of this place is delightful. Owing to its elevated situation, the temperature of the air is generally moderate; but, in consequence of this, there are often sudden changes, from heat to cold, in the same day, and frequent showers of rain. Thunder-storms are common, but not violent; and the sun is sometimes obscured by fogs so dense as not to subside till near the middle of the day. The mountain on which Villa Rica stands, appeared to Mr. Mawe to be from eight to nine miles across, and was chiefly composed of slate. This mountain was once excessively rich in gold; and for some time many private adventurers collected great quantities of it. This they appropriated to their own use, without paying the royal claim of one-fifth part of the produce. Since the year 1711, however, proper persons have been stationed here, for the regulation of the mines, and now all the gold that is obtained is de-

livered to certain officers that are appointed by the government to receive it. These take one-fifth of the whole weight for the prince regent; and the remaining four parts are purified, melted into pieces called ingots, then assayed, marked according to their value, and delivered to the owners, with a certificate to render them current.

About the year 1713 the quantity of gold obtained here was so considerable, that the royal fifth amounted to nearly half a million sterling per annum. The mountain became pierced like a honeycomb, for the miners penetrated every soft part they could find, and conveyed the cascalhão or substance dug out, to a convenient place to be washed. In rainy weather the torrents of water running down the sides of the mountain carried away much earthy matter, which contained small particles of gold, and deposited them in the ground near the base. When the waters abated, this rich deposit gave employment to great numbers of the people, who took it away and washed it at their convenience. Between the years 1730 and 1750 the mines were in the height of their prosperity. From this time they gradually became less productive, and, when Mr. Mawe was here, Villa Rica scarcely retained even a shadow of its former importance.

During his residence at this place, Mr. Mawe paid frequent visits to the mint; and he was permitted to witness every process that was performed there. In the smelting house he saw eight or ten small blast furnaces, which, in form, resembled so many blacksmith's hearths. The fuel used was charcoal. When a quantity of gold dust was brought by any person, it was immediately melted, purified, cast, and stamped. So that Mr. Mawe has seen men deliver their gold dust, and receive it in a form ready for use or circulation in less than an hour.

Twenty-fourth Day's Instruction.

BRASIL CONTINUED.

Narrative of Mr. Mawe's *Journey from Villa Rica to the Diamond Mines.*

From Villa Rica, Mr. Mawe, attended by the two soldiers and his negro servant, set out for Tejuco, the capital of the diamond district. They passed through the city of *Mariana*, and afterwards through a mountainous and romantic country, where they observed many small and neat houses, surrounded by coffee-plantations and orangeries. In their progress they met several mules, laden with sugar; which were destined for Villa Rica and Rio de Janeiro. Mr. Mawe informs us, that some parts of the country which he traversed, resembled in appearance that between Matlock and Derby; and that the mountains bore a strong resemblance to those of Westmoreland. In many places the land seemed equally well suited for agriculture and mining, for it was as rich at the surface as it was below. Among the crevices of some of the rocks topazes were found, but these were seldom of good quality.

On the second day of their journey the party arrived at an estate where there was an extensive gold mine belonging to two brothers; and which was worked by about two hundred negroes. It was Mr. Mawe's wish to have remained here a day or two, for the purpose of inspecting the operations; but, although the proprietors treated him with great kindness and hospitality, he imagined that they entertained some jealousy respecting his views, he consequently determined to proceed on his journey without delay. In riding past the works, he did not perceive that any kind of machinery

was used for facilitating the manual labour; and he observed that the tedious process of washing the cascalhão by hand was chiefly practised.

The route of the travellers was continued northward. They passed through a village, near which a species of white metal, called platina, is found in considerable quantity. This metal occurs in a granular form, and was originally discovered many years ago. In consequence of its great weight the people imagined that it was gold united with some other metal, from which it could not be separated. Hence they called it white gold; but, as it was not known to be of value, the work was gradually neglected, and at length abandoned.

It would occupy too much of our time to describe the whole country and all the villages and hamlets through which the travellers passed, betwixt Villa Rica and *Villa do Principe*. We shall therefore suppose them arrived at the latter town, which is situated near the confines of the diamond district, and on the high road that leads to it. This town contained about five thousand inhabitants, most of whom were shopkeepers, the rest were artisans, farmers, miners, and labourers. It contained a public edifice, to which every miner in the district brought such gold as he obtained, and where he paid the royal fifth, as is done at Villa Rica. At Villa do Principe, in consequence of its vicinity to the diamond district, the strictest regulations prevail respecting all persons proceeding thither, or returning thence.

The country around the town is fine and open; and is free from those impenetrable woods, which so frequently occur in other parts of the province. The soil is in general very productive, and the climate mild and salubrious.

At a place where gold was washed, about six leagues from Villa do Principe, Mr. Mawe says, that a lump of gold was found of several pounds weight; and, from the same place he obtained many curious and crys-

tallized pieces, and some specimens which weighed more than two ounces each.

After Mr. Mawe and his party had left this town, they traversed a country nearly destitute of wood and herbage, and the surface of which consisted chiefly of coarse sand and rounded quartz pebbles. This was the commencement of the diamond district. For the first four leagues it was extremely sterile, and in some places was mountainous. In the evening they arrived at the first diamond work in the Cerro do Frio, which at this time employed about two hundred negroes. On the ensuing day they continued their journey towards Tejuco, the capital of the district. They crossed two rapid rivulets, and afterwards reached a guard-house, situated near a stream, which had formerly been much noted for diamonds. Here a certain number of soldiers were stationed, who were always on the alert, and whose duty it was to ride after, and examine the passengers. All the adjacent country was rough, and destitute of vegetation, being covered, in every direction, with gritstone rocks full of rounded pebbles.

On the arrival of the travellers at *Tejuco*, they took up their abode in the principal inn of the place, a house which contained some neat rooms, and afforded tolerable accommodations. This town is built on the side of a mountain, and in a narrow valley which runs along its bottom.

The governor of the diamond district, having learned that Mr. Mawe was expected, came to Tejuco to meet him, and on the morning of Monday the 18th of September, they set out together on a journey to the great diamond works, at Mandanga, on the banks of the river Jigitonhonha. At these works about a thousand negroes were at this time employed.

The road was rough and mountainous; and the country appeared almost destitute of wood. A few stunted shrubs constituted nearly the whole of the vegetation. The party halted at a place about half way, and having descended a steep mountain, full a mile in declivity,

they entered a ravine or narrow valley, where they crossed the river Jigitonhonha, by a wooden bridge. They proceeded along the bank of the river, for about a league, to *Mandanga;* the land on each side appeared to be tolerably good, and was covered in many parts with underwood.

Around Mandanga there were about a hundred detached habitations. These were merely large huts, most of them of circular form, with high thatched roofs. The walls were formed of upright stakes, interwoven with twigs, and coated inside and out with clay. Near some of these houses were enclosures for gardens.

Mr. Mawe continued at this place five days, during which he was fully occupied in viewing and examining various parts of the works. The *Jigitonhonha* is here about as wide as the river Thames at Windsor, and is in general from three to nine feet deep. The part in which the negroes were now working formed a curve or elbow; and the current had been diverted from its usual course by a canal, in such manner as to expose a considerable part of the bed of the river. The deepest parts were laid dry by chain-pumps, worked by a water-wheel.

The mud was then carried away, and the cascalhão beneath it was afterwards dug up and removed to convenient places to be washed. This labour had formerly been performed by negroes, in a kind of conical bowls, called gamellas; but, of late, two inclined planes, each about one hundred yards in length, had been constructed, which, with carts moved by machinery, tended greatly to facilitate the work. During the dry season as much of the cascalhão is dug out as will occupy all the hands that can be employed for the remainder of the year. When carried from the bed of the river it is laid in heaps, which contain from five to fifteen tons each.

Water is conveyed from a distance, and is distributed to the various parts of the works by means of aqueducts, constructed with great ingenuity and skill. The method of washing for diamonds is as follows:—a shed consisting of upright posts, and a roof thatched with

long grass is erected in the form of a parallelogram, twenty-five or thirty yards along, and about fifteen yards wide. Down the middle of the area of this shed a current of water is conveyed through a canal covered with strong planks, on which the cascalhão is laid, two or three feet thick. On the other side of the area is a flooring of planks, embedded in clay, four or five yards wide, extending the whole length of the shed; and having a gentle slope from the canal. This flooring is divided by means of planks, placed edgewise, into about twenty compartments or troughs, each about three feet wide. The upper ends of these troughs communicate with the canal, and are so formed that water is admitted into them between two planks that are placed about an inch asunder. Through this opening the current falls, about six inches, into the trough, and may be directed to any part of it, or, if necessary, even stopped entirely out by a small quantity of clay. At the lower ends of the troughs a channel is dug, to carry off the water.

At equal distances, on the heap of cascalhão, which extends the whole length of the shed, are placed three high chairs for the officers or overseers. After these officers are seated, the negroes enter the troughs, each provided with a rake of peculiar form, with which he rakes into the trough from fifty to eighty pounds weight of cascalhão. The water being then let in, the cascalhão is spread about and continually raked up to the head of the trough, so as to be kept in constant motion. This operation is performed for about a quarter of an hour: the water then begins to run clearer, in consequence of the earthy particles having been wasted away. After this the gravel-like matter that remains is raked up to the end of the trough; and, as soon as the current flows away quite clear, the largest stones are thrown out, and afterwards those of inferior size; and then the whole contents of the troughs are examined with great care for diamonds.

When a negro has found a diamond, he immediately

stands upright and clasps his hands, and then extends them, holding the gem between his fore-finger and thumb. An overseer receives it from him, and deposits it in a gamella or bowl, which is suspended from the centre of the building, half full of water. In this vessel all the diamonds found in the course of the day are placed; and, at the close of the work, they are taken out and delivered to the principal officer, who, after having weighed them, registers the particulars in a book kept for that purpose.

When a negro is fortunate enough to find a diamond of the weight of an octavo (17½ carats*), much ceremony takes place. He is crowned with a wreath of flowers, and is carried in procession to the administrator, who gives him his freedom. He also receives a present of new clothes, and is permitted to work on his own account. When a stone of eight or ten carats weight is found, the negro receives two new shirts, a new suit of clothes, a hat, and a handsome knife. For smaller stones proportionate rewards are given.

Many precautions are requisite to prevent the negroes from embezzling diamonds. Although they work in a bent position, and consequently never know whether the overseers be watching them or not, yet it is easy for them to omit gathering any that they see; and to place them in a corner of the trough, for the purpose of secreting them at their leisure hours. To prevent this, they are frequently changed while the operation is going on. A word of command being given by the overseers, they instantly move into each others troughs, so that no opportunity of collusion can take place. If a negro be suspected of having swallowed a diamond, he is confined in a strong room until the fact can be ascertained. The punishment inflicted for smuggling diamonds is imprisonment and chastisement.

There is no particular regulation concerning the dress

* A carat is equal to four jeweller's grains, seven of which are equal to six grains of troy weight.

of the negroes. They work in the clothes most suitable to the nature of their employment, generally in a waistcoat and drawers. Their hours of labour are from a little before sun-rise till sun-set, half an hour being allowed at breakfast and two hours at noon.

The negroes are formed into working parties, called troops, each containing two hundred men, under the direction of an administrator and inferior officers. Each troop has a clergyman and a surgeon to attend it. The officers are liberally paid, and live in a style of elegance, which a stranger would not expect to see in so remote a place. Their tables are daily covered with a profusion of excellent viands, served on fine Wedgewood ware; and the state of their household generally corresponds with this essential part of it.

After Mr. Mawe has detailed the process of washing for diamonds, he proceeds to a general description of the situations in which these stones are found. The flat pieces of ground, on each side of the river, are, he says, equally rich, through their whole extent. Hence the officers, attached to the mines, are enabled to calculate the value of an unexamined piece, by comparison with the amount that has been found on washing an equal quantity in the part adjoining.

The substances that accompany diamonds, and are considered good indications of them, are bright bean-like iron ore, a slaty flint-like substance of iron texture, black iron ore in great quantities, rounded bits of blue quartz, yellow crystal, and other materials entirely different from any thing known to be produced in the adjacent mountains. Diamonds are by no means peculiar to the beds of rivers or deep ravines: they have been found in cavities and water courses, even on the summits of mountains.

The Jigitonhonha, and other streams in its vicinity, have produced great numbers of diamonds, many of which have been of the finest quality. These vary in size; some of them are so small, that four or five are re-

quired to weigh one grain; and it seldom happens that more than two or three stones of from seventeen to twenty carats weight are found in the course of a year. During the five days that Mr. Mawe was at Mandanga, the whole number of diamonds that were found amounted only to forty, the largest of them was only of four carats weight, and was of a light green colour.

After this Mr. Mawe was conducted to a diamond work, called *Montero*, about two miles up the river; and, about a league farther, to a gold work, called *Carapata*. The cascalhão at the latter place was taken from a part of the river eight feet deep, which formed an eddy under a projecting point of rock. Mr. Mawe was shown a heap of it, that was estimated to be worth ten thousand pounds. In removing this heap from its bed, four hundred negroes had been employed three months; and it was calculated that the washing of it would occupy one hundred men for three months more. This is esteemed a very rich place. While Mr. Mawe was here, six negroes, in the course of four hours, found as much gold as weighed near twenty ounces.

In the afternoon the travellers returned to *Tejuco*. This place being situated in the midst of a sterile district, which produces nothing for the maintenance of its inhabitants, depends, for its supply of provisions, on farms that are several leagues distant. The bread of the country was, at this time, extremely dear; Indian corn, from which it is made, being very scarce. The beef was not good; but pork and poultry were rather plentiful. A great degree of indolence prevailed among the inhabitants, yet many of them possessed considerable wealth, in consequence of the circulation of property, occasioned by the vicinity of the diamond works. A large annual sum was paid by the government for the hire of negroes, for the salaries of officers, and various articles requisite for the works. These occasioned a considerable trade. The shops were stocked with English cottons, baizes, cloths, and other manufactured

goods; with hams, cheese, butter, porter, and other articles of consumption; most of which were brought on the backs of mules, from Bahia and Rio de Janeiro.

Owing to its situation by the side of a hill, Tejuco is very irregularly built. The streets are uneven; but the houses, compared with those of other towns in the interior, are, in general, well constructed and in good condition. In no part of Brasil did Mr. Mawe meet with society so select and agreeable, as in this; he considers Tejuco as the court of the mining district. In the manners of the principal inhabitants there was no ceremonious reserve; but their whole demeanour was affable and polite. They chiefly dressed after the English manner, and in articles of English manufacture, particularly in calicoes, straw hats, artificial flowers, &c. The ladies, though ill educated, had in general a taste for music, and many of them played on the guitar with considerable taste; but piano fortes had not at this time been introduced. Dancing was a favourite amusement with them. It was not customary for the ladies to go much abroad, except to mass; and then they were usually carried each in a chair hung with curtains that were suspended from a canopy above. Warm baths are here very generally used. They are considered of great efficacy in removing recent colds, to which all persons are liable, on account of the changeable nature of the climate.

In the treasury at Tejuco are deposited, monthly, all such diamonds as are received from the different works in the neighbourhood. They are carefully weighed, and some of them are selected and kept separate. The average quantity obtained may be estimated at from twenty thousand to twenty-five thousand carats annually. They are afterwards sent, under a military escort to Rio, and are there lodged in the treasury. They are tied up in black silk bags; and are deposited in elegant cabinets; and the whole are locked up in strong chests bound with iron.

It had been the intention of Mr. Mawe to continue

his journey eastward from Tejuco, to a celebrated mining district, called *Minas Novas;* but he was prevented by illness from accomplishing this intention. While he remained at Tejuco, which he did for some time, for the purpose of regaining strength sufficient to encounter the fatigues of a journey back to the capital, he employed himself in collecting information from intelligent persons respecting several parts of the adjacent country.

The principal village in Minas Novas is called *Tocaya;* and is situated about thirty-five leagues north-east of Tejuco: In many of the streams of this part of Brasil are found white topazes, which have thence obtained the appellation of *Minas Novas.* They are beautiful transparent pebbles, and generally of a rounded form, though sometimes they occur in a crystallized shape. Blue topazes and aqua marinas are also found here. This neighbourhood is likewise noted for producing a beautiful yellow kind of gems, called chrysoberyls, which are much esteemed in Brasil.

The country is fertile, and abounds in a great variety of beautiful kinds of wood for cabinet work. It also yields numerous species of fruit; and is extremely favourable to the growth of sugar and coffee. The plantations, however, are chiefly of cotton; and the cotton here produced is considered to be excellent both in colour and quality. It is transported to Rio de Janeiro on mules; and many hundreds of these useful animals are continually employed in carrying it. The trade to Minas Novas from Rio, consists principally in negroes, iron, salt, woollens, hats, printed cottons, hardware, arms, and some fancy articles; a little wine and oil, salt fish and butter.

Near Tocayo the river *Jigitonhonha* flows into a larger river called *Rio Grande,* which, taking an easterly direction, falls into the sea near Porto Seguro. This river is free from cataracts, and is navigable by small vessels.

At some distance from Tejuco is a rivulet called

Abaité, celebrated for having produced the largest diamond which the prince regent of Portugal ever possessed. It was found, about the year 1800, by three men who had been banished for their crimes into the interior of the country. These men, who had been forbidden to approach any of the capital towns, or to remain in civilized society, endeavoured to explore new mines, in unfrequented parts of the country, in the hope that, sooner or later, they might have the good fortune to make some important discovery, which would obtain a reversal of their sentence. They wandered about for more than six years, during which time, though exposed to excessive hardships and fatigue, they made frequent searches in the various rivers of the adjacent districts. At length they accidentally made some trials in the river Abaité, at a time when its waters were particularly low; and they had the good fortune to discover a diamond that was nearly an ounce in weight. Elated by this discovery, which, at first, they could scarcely believe to be real; and hesitating between a dread of the rigorous laws relative to diamonds, and the hope of recovering their liberty, they ventured to consult a clergyman of the neighbourhood. This gentleman advised that they should trust to the mercy of the state: he accompanied them to Villa Rica, and procured them access to the governor. They threw themselves at his feet; delivered the gem on which their hopes rested, and related to him all the circumstances connected with the discovery of it. The governor, astonished at its magnitude, called for the officers of the jewel department, to ascertain whether it really was a diamond. This was soon decided; and, being thus in possession of the largest diamond that had ever been found in America, he determined to suspend the sentence of the men, as a reward for their having delivered it to him; and to send it immediately to Lisbon, and the clergyman along with it, to state the particulars concerning its discovery. The sovereign confirmed the pardon of the delinquents, and rewarded the clergyman for the trouble he had undergone.

Mr. Mawe, speaking of the diamonds obtained in Brasil, states, that the earthy matter which forms the bottom of the rivulet was originally washed only for gold. No idea was entertained that any of these rivulets contained diamonds. Several curious bright stones, however, were at different times brought to the governor of Villa do Principe, and were used by him as counters at cards. Soon afterwards a few of these stones found their way to Lisbon, and were given as pretty pebbles to the Dutch minister at that court. He sent them to Holland, which was then the principal mart in Europe for precious stones. The lapidaries, to whom these pebbles were presented for examination, pronounced them to be diamonds. Information was sent to the Dutch minister at Lisbon, who did not fail to profit by the occasion; for he managed the affair with the government so well, that he contracted for the precious stones, at the same time that he communicated the intelligence. The Portuguese government, however, afterwards endeavoured to monopolize the diamonds: they made a distinct district of Cerro do Frio, and placed it under peculiar laws and regulations.

The number of diamonds sent over during the first twenty years after the discovery is said to have been almost incredible, and to have exceeded one thousand ounces in weight. During the period from 1801 to 1806 inclusive, the expenses of the various diamond works, amounted to £204,000; and the diamonds sent to the royal treasury at Rio weighed 115.675 carats, or about 830 ounces. The value of the gold found in the same period amounted to £17.300 sterling. These years were esteemed singularly productive; for the mines do not in general yield to the government more than twenty thousand carats annually; but, exclusive of this amount, there are vast quantities of diamonds smuggled.

The diamonds of Brasil were formerly sent to Holland to be cut, the Dutch jewellers having been contractors for them from the period of the first discovery

of the mines. But, since the emigration of the court of Portugal to Rio de Janeiro, that trade has been transferred to England, where these stones annually arrive, and are sold by private contract.

The diamonds now in the possession of the prince regent of Portugal, are said to be unequalled in number, size, and quality, by those of any potentate in the world. Mr. Mawe was informed that they exceeded in value three millions sterling.

The diamond district has a direct communication with Bahia, and mules are continually employed in travelling with goods from one place to the other. The journey is much longer than that to Rio de Janeiro, but the country is less mountainous. The commodities sent from Tejuco and Minas Novas are very trivial: they consist only of topazes, amethysts, and other precious stones.

From *Tejuco* Mr. Mawe returned through *Villa Rica* to *Rio de Janeiro*, where he arrived about the middle of February, 1810.

Twenty-fifth Day's Instruction.

BRASIL CONCLUDED.

Bahia, Marannon, Ternambuco, and Para.

FROM *Rio de Janeiro*, where we shall now leave Mr. Mawe, we will proceed along the sea-coast of Brasil northward, to Porto Seguro. In so doing we shall pass the two capes of *St. Frio* and *St. Thomas*; and, at about the twentieth degree of south latitude, shall reach the small maritime town of *Spiritu Santo*. This place is defended by a fort; and has, in front of it, a deep bay, the entrance of which is confined by an island, from which a long bank of sand extends to the continent.

On one side of it is a naked rock, and on the other a conical hill. The territory adjacent to this place is fertile, and abounds in all the necessaries of life.

Proceeding still in a northerly direction, the next place of importance that we arrive at, is *Porto Seguro*. This is situated within the government of *Bahia*, a province which comprises about fifty leagues of coast; and, though one of the least populous, is one of the most fertile and luxuriant divisions of Brasil. It is bounded on the south by the river *Doce*, on the west and north by the river *St. Francisco*, and on the east by the ocean.

The superintendance of this province is vested in a governor-general, who has a temporary control over all the tribunals and departments. A senate, consisting of four members and a president, transact the public concerns of Bahia, the capital examine the weights and measures, plan public improvements, &c. The revenues of the government are partly derived from duties laid on merchandise; but the principal source of income arises from the produce of the diamond and gold mines, and from the sale of Brasil wood. These pass solely through the hands of the government, and are very profitable. The value of the Brasil wood exported from Brasil into Europe is estimated to amount to between thirty and forty thousand pounds per annum.

For the account which I shall give you of *Porto Seguro*, I am indebted to the narrative of Mr. Lindley's voyage to Brasil. This gentleman, who was engaged in a mercantile adventure in the southern seas, was compelled, by stress of weather, and the defective state of his ship, to run her into Porto Seguro. As it was contrary to the existing laws, for any merchant vessel, except from the mother country, to enter the harbours of Brasil, and as, consequently, few other foreign vessels than those from Portugal were ever seen here, the curiosity of the inhabitants was immediately roused. Great numbers of them hastened on board the ship; and, like so many monkeys, they peeped into every

package and box that was open. No sooner had they opened the medicine chest, than they eagerly enquired concerning its owner, and it was impossible to convince them that Mr. Lindley was not a doctor. Before the close of day several canoes came alongside the vessel, bringing great numbers of sick, lame, and blind people; and he felt himself in some degree obliged to administer medicines to them.

The harbour, from which Porto Seguro has its name, is described, by this gentleman, to be formed by a reef of rocks, which run from an extended point of land, to the distance of about a mile from the shore. On entering the harbour, the view of the country is delightful. Near the water's edge there is a range of fishermen's cottages; shaded by waving cocoa-nut-trees in front, and each having an adjoining orange-ground. At the back of these cottages the native underwood intrudes; and, intersected by numberless paths, forms evergreen groves, full of birds of rich plumage. Towards the north the land rises to a steep hill, which is ascended by a winding path; and on the summit of which stands the town.

The streets are tolerably broad, but they are irregularly disposed. The houses are for the most part only one story high, and are all built of unburnt bricks and plastered over. The windows are destitute of glass, and have only a kind of blinds formed of split cane.

The principal inhabitants of Porto Seguro have country houses or farms, most of which are situated on the banks of the river. At these they have plantations of sugar-canes, and cassada or manioc. Poultry and domestic cattle are here plentiful. This part of Brasil abounds in delicious fruits, many kinds of which are used in the preparation of confections and marmalades. Most of the inhabitants are uneducated and ignorant: few of the females are able to read; and the art of writing is not a common acquisition even among the men. In their general manners these people are extremely filthy. They pass much of their time in senseless

apathy and indolence: they sometimes spend whole days in visiting each other, yawning in flimsy conversation, or playing at cards for pence; while their plantations and mercantile concerns are managed by European overseers, favourite mulattoes, or confidential slaves.

The dress of the men consists of little more than a shirt and a pair of thin calico drawers, that scarcely reach to the knee; they have neither stockings nor hat. In cool or rainy weather, indeed, they sometimes have the addition of a cloak, or a kind of bedgown wrapped loosely round them.

While Mr. Lindley was in Porto Seguro, he was requested by the commandant of the place, to visit, in a medical capacity, a gentleman of considerable importance. This he did, and shortly afterwards the gentleman died. On the ensuing day the bells tolled almost incessantly, in preparation for the interment; and about eight o'clock it took place. In the procession to the church, the banner of the church, surmounted with a large silver cross, went first. This was followed by smaller silver crosses, and by the principal inhabitants of the town (about one hundred and fifty in number) each carrying a wax light: there were also three priests, several choristers, and other persons. The body was carried in an open coffin, with the face exposed, and dressed in the grey habit of a Franciscan friar. In several parts of the town the procession stopped, whilst mementos in full chorus were sung.

Several of the rivers of this part of Brasil wash from the mountains, emeralds, sapphires, topazes, and numerous other kinds of precious stones; but, when Mr. Lindley was here, little attention was paid to the collecting of them.

About two hundred miles north of Porto Seguro is *Bahia* or *St. Salvador*, the capital of the province, and one of the principal cities of Brasil.

Description of Bahia. From the Narrative of a Voyage to Brasil, by THOMAS LINDLEY.

THE harbour in front of this city is called the *Bay of All Saints*, and is about three leagues broad at its mouth, twelve leagues across, and about thirty-six in circumference. It is so large and commodious that it would afford anchorage and shelter for the united shipping of the whole world.

The city of *Bahia* is seated, north of the bay, on the summit of a lofty hill, and at a little distance from the shore; and one of the streets ranges parallel with the beach. From the inequality of the ground, and from the plantations that are interspersed among the houses, it occupies a considerable space of ground. In this, as in all catholic cities, the *churches* are by far the most distinguished edifices. The cathedral of Bahia is large, but in a ruinous state. One of the churches has been constructed entirely of European marble. The rails of the altar are formed of cast brass. The whole of the wood work is inlaid with tortoiseshell, and the grand chancel, and several other communion recesses, have their respective altars loaded with gilding, painting, images, and a profusion of other decorations. There are in this city several monasteries, convents, and parochial churches.

The *streets* are narrow, and wretchedly paved. Being never cleaned, they are disgustingly dirty. The backs of many of them are receptacles for filth, which, exposed to so extreme a heat as here prevails, would greatly injure the health of the inhabitants, were not their injurious effects counteracted by the salubrious breezes which prevail, in consequence of the elevated situation of the place.

There are two principal *squares*. In one of these, the royal square, is the house or palace of the governor, an old and insignificant building; and opposite to this are the mint and public offices. On one side are the hall of the senate and the prison.

Some of the principal inhabitants of Bahia have large and elegant mansions, appropriately fitted up; but the habitations of others, even of many who are opulent, have a sombre appearance and are excessively filthy within. All the *houses*, instead of glazed windows, have wooden drop lattices, which want even the addition of paint to enliven or preserve them. The lowest orders, the mulattoes and negroes, live in tiled cabins, open to the roof. The number of inhabitants is about one hundred thousand, of whom thirty thousand are whites, thirty thousand mulattoes, and the rest negroes.

Ship-building is carried on here to a considerable extent. Even some ships of the line have been built in the government dock yard; and many merchant-ships have been constructed in the private yards. The chief *trade* of the place is with Lisbon and Oporto. The imports are European and Indian manufactures, wine, flour, butter, cheese, salt, &c. and the exports are cotton, sugar, a spirit distilled from the juice of sugar-canes, coffee, tobacco, lignum vitæ, mahogany, satin and tulip woods, and a variety of gums, balsams, and medicinal roots. When Mr. Lindley was here the Bahians imported slaves, wax, gold dust, and other articles from Africa.

The city abounds in artificers, among whom are lapidaries, jewellers, gold and silversmiths; all excellent in their several occupations, but deficient in fashion and taste. Manufactories of all kinds, except of leather and trifling articles, are forbidden.

This place is miserably provided with accommodations for strangers. There are no inns; and those persons who wish for a temporary residence on shore, have no alternative than to take the whole or part of a house, and to furnish it themselves. This, however, is easily done; a few chairs, trunks, and a table will render it equal in furniture to most of the houses in the place. There are several eating houses: these are distinguished by a tricoloured flag over the door, but they are inconceivably dirty, and the cooking is worse than that of a

cellar in London. Coffee-houses, if dirty shops, where a few tables and benches ranged in front, with a kind of bar in the background, can be dignified by that appellation, abound in every street. In these a vile liquid called coffee is distributed, and is rendered still more disgusting to the eye, by being served in glasses. These places are, every morning, crowded with persons of different ranks, the respectable and the vulgar, who, for about fivepence halfpenny sterling, procure a breakfast, consisting of a glass of coffee, and a roll spread with rancid Irish butter, the refuse of the Lisbon market.

Both the city and country are infested with beggars, for in Brasil there are no public charities nor institutions for the relief of the poor. The male inhabitants of Bahia generally dress in the English style, except when they make formal visits, or on holidays; and, on these occasions, they have an excess of embroidery and spangles on their waistcoats, and of lace on their linen. At their return home, however, they throw off these gala clothes, and either put on a gown or thin jacket, or content themselves with remaining in their shirts and drawers. The usual dress of the ladies is a single petticoat over a chemise. The latter is formed of the thinnest muslin that can be obtained, and is generally much worked and ornamented. Stockings are seldom used. Women of all ranks, even to the negresses, adorn themselves with long gold chains, suspended round their necks, and down the bosom. The workmanship of these chains, and the weight of the ornaments that are attached to them, mark the different rank and station of the wearers. During the rainy season the women shuffle about in slippers, and are clad in a thick blue and white cotton wrapper, or a woollen great coat, faced with shag. Their hair, which they suffer to grow to a great length, is twisted, fastened in a knot on the head, and loaded with a profusion of pomatum and the powder of tapioca. Persons of both sexes suffer the nails of their thumbs or fore-fingers, or

sometimes of both, to grow to a great length, and pare them to a sharp point.

On account of the irregular surface of the streets, there are in Bahia few carriages drawn by horses; but sedàn chairs are numerous, and can be procured in every street. These are not like ours, but are much higher, and open at the sides from top to bottom, so that a person on stepping into them, is at once seated. They are carried on the shoulders of two stout negroes, by fixed pieces of wood, which project from the upper part of the chair before and behind. Some of these chairs, belonging to wealthy individuals, are profusely ornamented, and are hung with deep curtains of silk or stuff, stamped with gold and silver leaf in a great variety of patterns.

The chief amusements of the Bahians are derived from the festivals of different saints, the professions of nuns, sumptuous funerals, and other grand ceremonies, all of which are attended by processions. Scarcely a day passes in which one or other of these does not occur; and, on the grand festivals, after coming from church, the inhabitants generally visit each other and dine together.

While Mr. Lindley was in Bahia, he was invited to dine with one of the principal families of the place. The dishes he says were plain. The company in general used their hands instead of knives and forks, though there was no want of these articles. They first took in their fingers a little meat, then vegetables and the flour of the cassada root: these they rolled in sauce, oil, or soup, and then squeezed the whole, in the palm of the hand, into the shape, and about the size of a wash-ball. When thus prepared they conveyed it into their mouths, and whilst they were eating one lump, they were employed in preparing another.

Indelicate and disgusting as such a practice may seem to Europeans, it is constantly adopted by persons of both sexes and most ranks here. Even, when before

strangers, if they take up a knife and fork, they are soon tired of so unusual, so slow and tedious a process, and soon lay them down, and fall to in their old way with redoubled eagerness.

Fernambuco.

Proceeding north from Bahia, we next arrive at the extensive government of *Fernambuco*, or *Olinda*, as it is sometimes called. It is bounded on the south and west by the governments of Bahia, *Goyaz*, and *Marannon*, and on the north and east by the sea. The cultivated plains of Fernambuco yield considerable quantities of sugar and cotton. Many of the mountains are covered with forests that abound in Brasil wood, numerous cargoes of which are annually exported to Europe.

The river *Francisco*, which forms part of the southern boundary of Fernambuco, rises among the mountains west of Rio de Janeiro, but its source has not been correctly ascertained. It runs towards the north-east, then, after losing itself underground for several miles, it rises, and taking an easterly course, falls into the sea about the eleventh degree of south latitude.

The capital of this province is *Olinda*, a town situated about the eighth degree of south latitude, and at the distance of about a mile from the sea. It contains somewhat more than two thousand Portuguese inhabitants, and a much greater number of Indians and people of colour. This place has a small harbour, the narrow entrance into which is fortified, and rendered inaccessible to strangers. The trade of Olinda is carried on by a port situated at the mouth of a small river on which the town is built.

Along the whole of this part of the coast there extends an almost continued wall of rocks, sixty feet and upwards in height, which allow vessels to approach only by a few narrow openings at different places. About sixty miles north of Olinda, is *Paraiba*, a tolerably well built trading town, situated some miles from the sea,

and on a river of the same name, at the mouth of which there is a harbour. This river, however, is very shallow in many parts, and is so far interrupted by rocks, sand banks, and islands, that small vessels only can ascend as far as the town. Wheat, barley, potatoes, and fruit are the produce of the adjacent country. Beyond Paraiba, towards the interior, the land rises gradually into fertile hills and dales, covered with wood and pastures.

North of this place is a district called *Rio Grande*, so named from a river of considerable magnitude, which descends from the mountains in the interior, runs north-east, and, by several mouths, loses itself into the sea. This district produces wheat, hemp, cows and horses in such abundance that it is reckoned the richest part of Brasil; but, owing to the numerous flats in the river, an extensive navigation cannot be carried on.

An island called *Fernando di Noronha*, though distant nearly sixty leagues from the coast, is also attached to the government of Fernambuco. It is somewhat more than a league in length, and consists partly of hills, some of which appear to have been volcanoes, and partly of plains, the soil of which is fertile, deep, and impregnated with nitre. The Portuguese have here several forts and a small garrison.

Marannon, or *Maragnan*.

The province next to Fernambuco is that of *Marannon*. It extends along the coast from the mountains of Fernambuco, to the frontiers of Para. The southern parts of this government are mountainous; and thence many rivers proceed northward to the sea. The northern parts are more level and fertile.

The first production that was exported from this country was ambergris, which was thrown up, in considerable quantities, on the shores. But, when this article was exhausted, the inhabitants employed themselves in the cultivation of the land, and they now ob-

tain great quantities of cotton, indigo, and rice. Different kinds of dying drugs are also produced; and the plains are filled with numerous herds of cattle.

All the commerce of this province is carried on by the port of *St. Louis*, situated in a large island called *Marannon*, and separated from the continent only by a river. All other parts of the coast are inaccessible, on account of the shallows, hills of sand, and rocks with which it is bordered. Even the harbour of St. Louis is beset with rocks and islets which render the passage into it extremely dangerous.

Para.

The most northern government of Brasil is that of *Para*, situated on the river Amazon. This province comprehends even that part of *Guiana* which belongs to Portugal. Some districts of Para are barren, and others fertile, producing, where they are properly cultivated, great quantities of cotton, sugar, &c. Formerly the trade was confined to vanilla, sarsaparilla, and cotton, the spontaneous produce of the ground: these were collected by the Indians, and then brought to the capital for sale; and it was not until the labour of negroes was introduced, that the lands were cultivated, and the different West India productions were raised.

The capital of this province is *Para*, or *Belem**, a regularly built and fortified town, situated at the influx of the river *Tocantin* into the eastern branch of the *Amazon*, and opposite to the island of *Johannes*, or *Marajo*. Its harbour, however, is shallow, and the approach to it is difficult, on account of the various currents which set along the coast.

The smaller governments of Brasil are *Goyaz*, westward of Bahia, an inland and mountainous district, which contains many desert tracts, not hitherto ex-

* See page 21.

plored; *Matto Grosso*, westward of *Goyaz*; and *Minas Geraes*, or *Generales*, a considerable part of which has already been described in the narrative of Mr. Mawe. Respecting the interior of Brasil little has hitherto been ascertained. A considerable portion of it, however, is known to be traversed from south to north by the rivers *Aranguay* and *Tocantin*, which unite their streams about the sixth degree of south latitude; and the united waters of which fall into the Amazon.

FINIS.

C. Whittingham, College House,

3 2044 021 237

THE BORROWER WILL BE CHARGED AN OVERDUE FEE IF THIS BOOK IS NOT RETURNED TO THE LIBRARY ON OR BEFORE THE LAST DATE STAMPED BELOW. NON-RECEIPT OF OVERDUE NOTICES DOES NOT EXEMPT THE BORROWER FROM OVERDUE FEES.

rned to
ast date

ncurred
specified

WIDENER
WIDENER
DEC 1 3 1995
CANCELLED
BOOK DUE